

**OPERATORS MANUAL**  
**FOR KUSTODIAN ION LANE MACHINES**  
**EDITION 4:12**

KEGEL LLC.  
1951 Longleaf Blvd.  
Lake Wales, FL 33859  
863-734-0200 / 800-280-2695

# CHAPTER 7

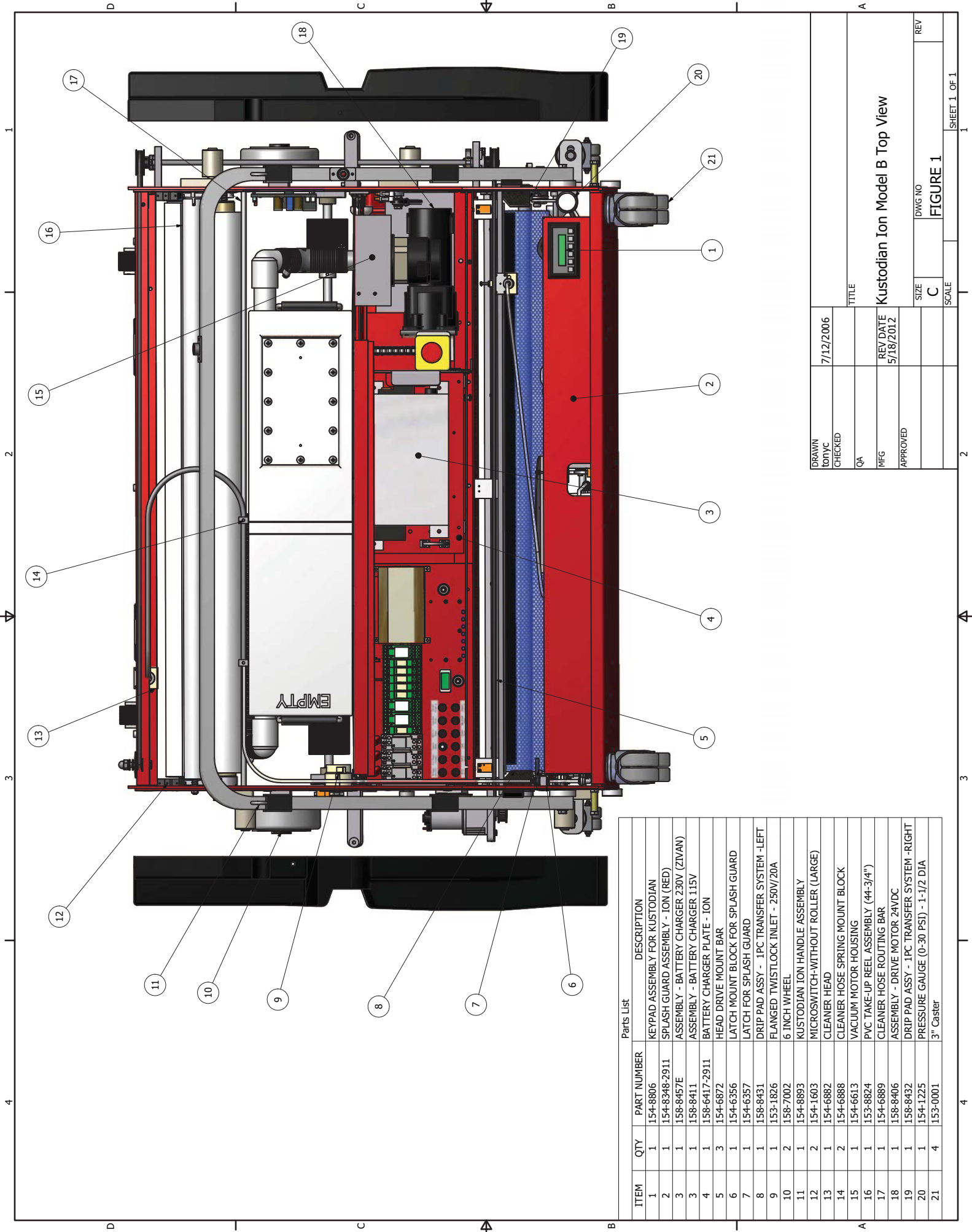


## Mechanical Drawings

### Machine Descriptions and Part Numbers

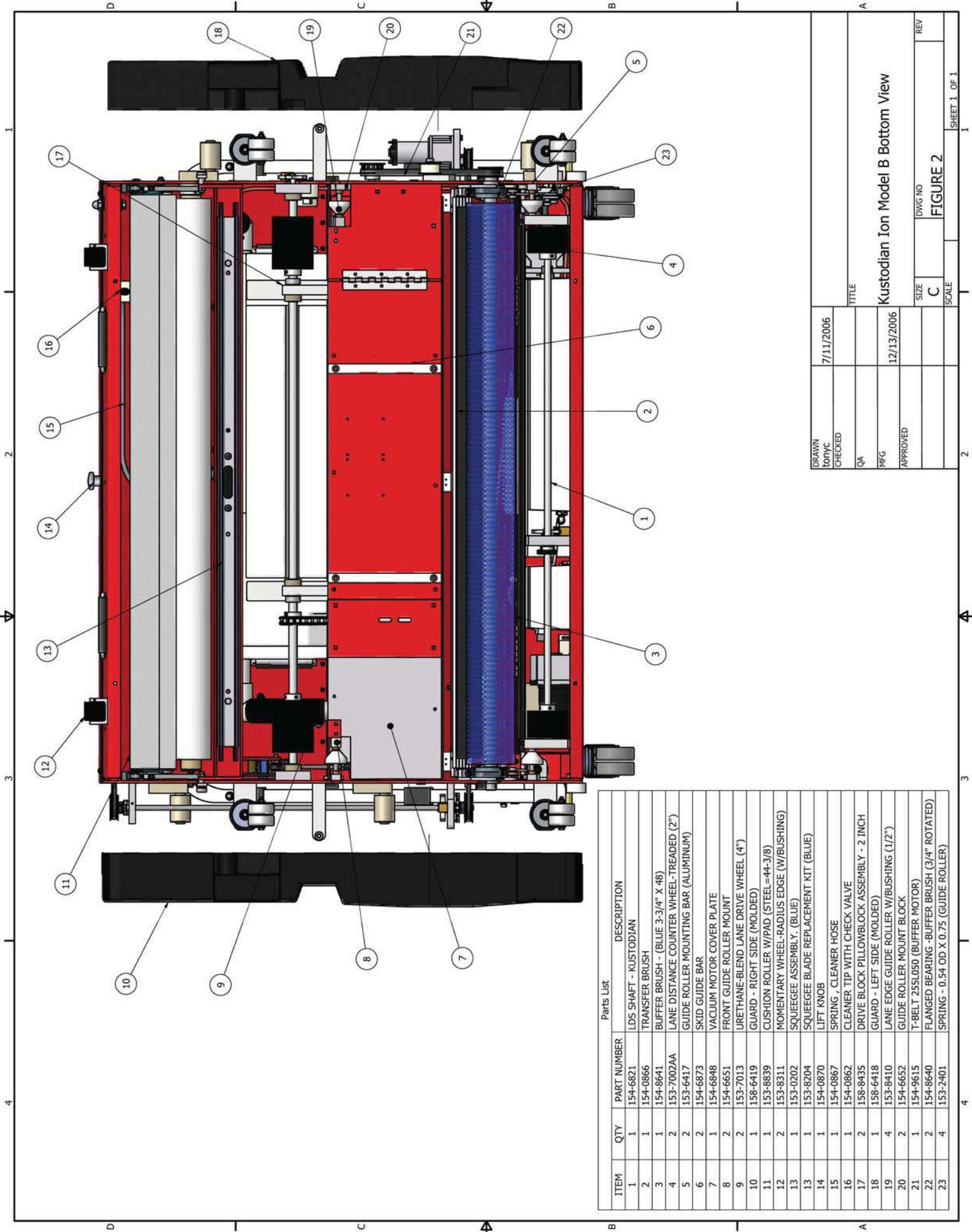
The following figures show major systems for the Walker and the Ion and the associated parts:

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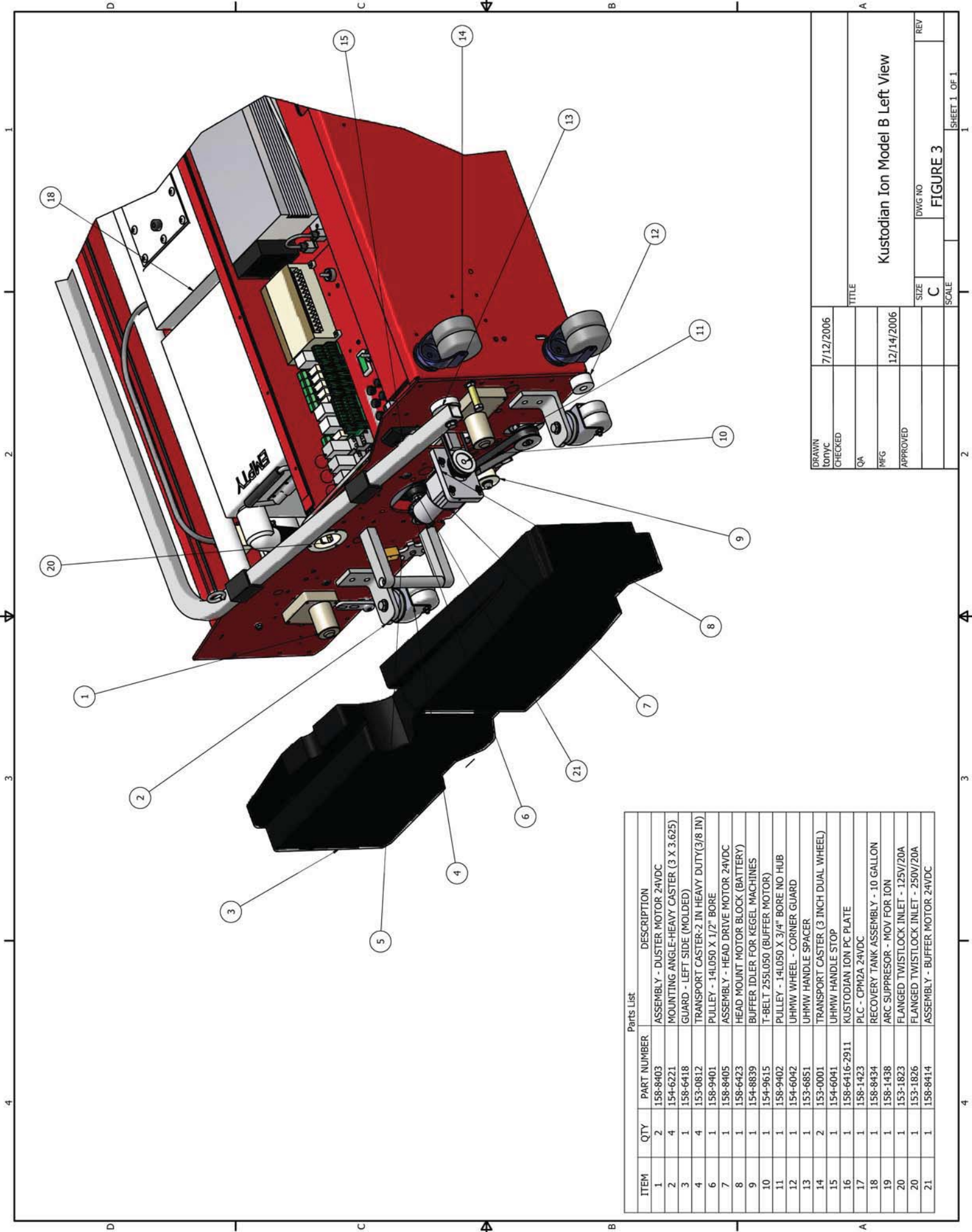
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	154-8806	KEYPAD ASSEMBLY FOR KUSTODIAN
2	1	154-8348-2911	SPLASH GUARD ASSEMBLY - ION (RED)
3	1	158-8457E	ASSEMBLY - BATTERY CHARGER 230V (ZIVAN)
3	1	158-8411	ASSEMBLY - BATTERY CHARGER 115V
4	1	158-6417-2911	BATTERY CHARGER PLATE - ION
5	3	154-6872	HEAD DRIVE MOUNT BAR
6	1	154-6356	LATCH MOUNT BLOCK FOR SPLASH GUARD
7	1	154-6357	LATCH FOR SPLASH GUARD
8	1	158-8431	DRIP PAD ASSY - .1PC TRANSFER SYSTEM -LEFT
9	1	153-1826	FLANGED TWISTLOCK INLET - 250V/20A
10	2	158-7002	6 INCH WHEEL
11	1	154-8893	KUSTODIAN ION HANDLE ASSEMBLY
12	2	154-1603	MICROSWITCH-WITHOUT ROLLER (LARGE)
13	1	154-6882	CLEANER HEAD
14	2	154-6888	CLEANER HOSE SPRING MOUNT BLOCK
15	1	154-6613	VACUUM MOTOR HOUSING
16	1	153-8824	PVC TAKE-UP REEL ASSEMBLY (44-3/4")
17	1	154-6889	CLEANER HOSE ROUTING BAR
18	1	158-8406	ASSEMBLY - DRIVE MOTOR 24VDC
19	1	158-8432	DRIP PAD ASSY - .1PC TRANSFER SYSTEM -RIGHT
20	1	154-1225	PRESSURE GAUGE (0-30 PSI) - 1-1/2 DIA
21	4	153-0001	3" Castor

DRAWN IonyC	7/12/2006	TITLE	Kustodian Ion Model B Top View
CHECKED		REV/DATE	5/18/2012
QA		APPROVED	
MFG		SIZE	C
		DWG NO	FIGURE 1
		SCALE	
		SHEET 1 OF 1	



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	154-6821	LDS SHAFT - KUSTODIAN
2	1	154-0866	TRANSFER BRUSH
3	1	154-8641	BUFFER BRUSH - (BLUE 3-3/4" X 48)
4	2	153-7002AA	LANE DISTANCE COUNTER WHEEL-TREADED (2")
5	2	153-6417	GUIDE ROLLER MOUNTING BAR (ALUMINUM)
6	2	154-6873	SKID GUIDE BAR
7	1	154-6848	VACUUM MOTOR COVER PLATE
8	2	154-6651	FRONT GUIDE ROLLER MOUNT
9	2	153-7013	URETHANE-BLEND LANE DRIVE WHEEL (4")
10	1	158-6419	GUARD - RIGHT SIDE (MOLDED)
11	1	153-8839	CUSHION ROLLER W/PAD (STEEL=44-3/8)
12	2	153-8311	MOMENTARY WHEEL-RADIUS EDGE (W/BUSHING)
13	1	153-8204	SQUEEGEE ASSEMBLY. (BLUE)
14	1	154-0870	LIFT KNOB
15	1	154-0867	SPRING , CLEANER HOSE
16	1	154-0862	CLEANER TIP WITH CHECK VALVE
17	2	158-8435	DRIVE BLOCK PILLOWBLOCK ASSEMBLY - 2 INCH
18	1	158-6418	GUARD - LEFT SIDE (MOLDED)
19	4	153-8410	LANE EDGE GUIDE ROLLER W/BUSHING (1/2")
20	2	154-6652	GUIDE ROLLER MOUNT BLOCK
21	1	154-9615	T-BELT 255L050 (BUFFER MOTOR)
22	2	154-8640	FLANGED BEARING - BUFFER BRUSH (3/4" ROTATED)
23	4	153-2401	SPRING - 0.54 OD X 0.75 (GUIDE ROLLER)

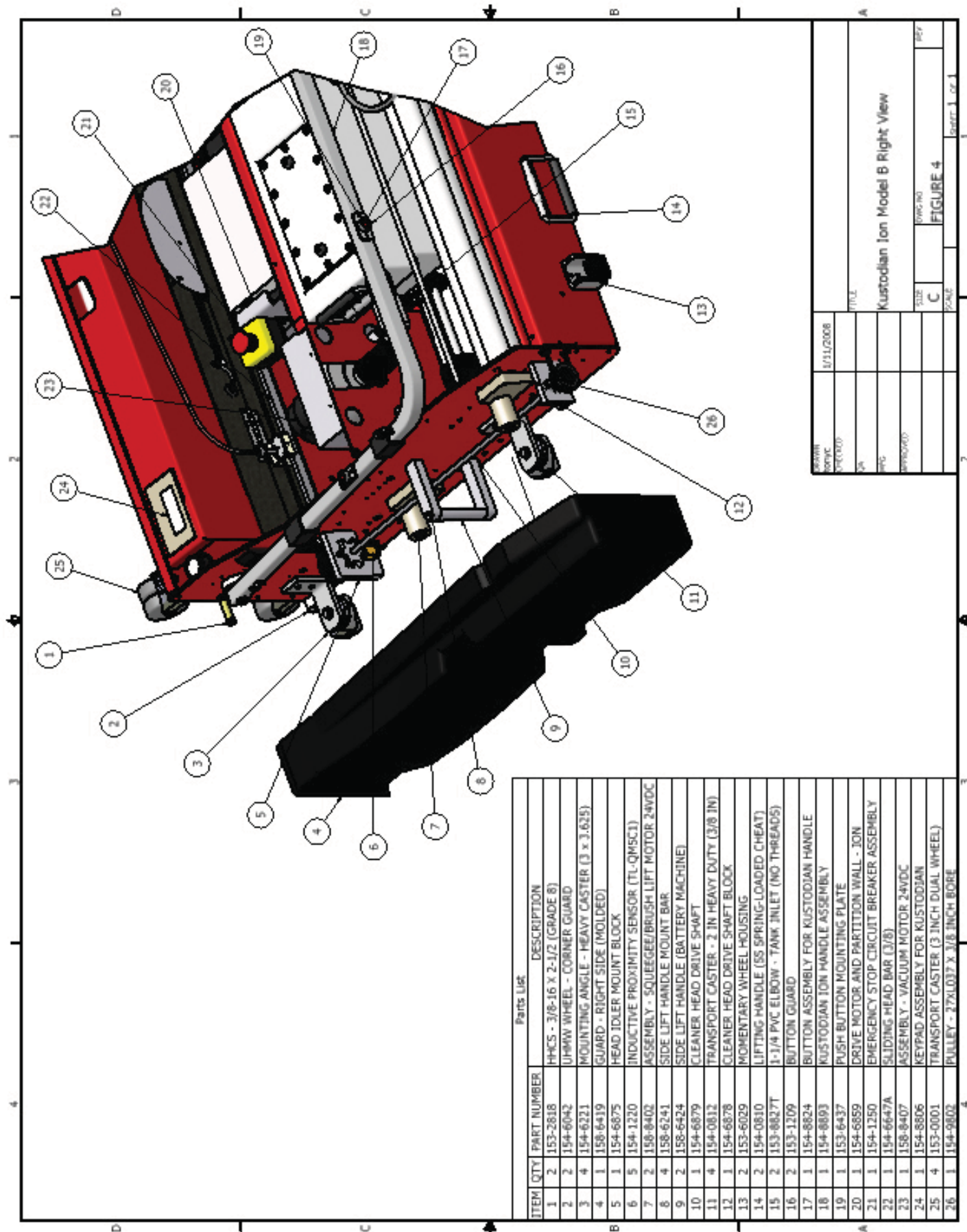
DRAWN TONYC	7/11/2006	TITLE	Kustodian Ion Model B Bottom View
CHECKED		DATE	
QA		SCALE	
MFG	12/13/2006	DWG NO	FIGURE 2
APPROVED		SIZE	C
		REV	



Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	158-8403	ASSEMBLY - DIUSTER MOTOR 24VDC
2	4	154-6221	MOUNTING ANGLE-HEAVY CASTER (3 X 3.625)
3	1	158-6418	GUARD - LEFT SIDE (MOLDED)
4	4	153-0812	TRANSPORT CASTER-2 IN HEAVY DUTY(3/8 IN)
6	1	158-9401	PULLEY - 14L050 X 1/2" BORE
7	1	158-8405	ASSEMBLY - HEAD DRIVE MOTOR 24VDC
8	1	158-6423	HEAD MOUNT MOTOR BLOCK (BATTERY)
9	1	154-8839	BUFFER IDLER FOR KEGEL MACHINES
10	1	154-9615	T-BELT 255L050 (BUFFER MOTOR)
11	1	158-9402	PULLEY - 14L050 X 3/4" BORE NO HUB
12	1	154-6042	UHMW WHEEL - CORNER GUARD
13	1	153-6851	UHMW HANDLE SPACER
14	2	153-0001	TRANSPORT CASTER (3 INCH DUAL WHEEL)
15	1	154-6041	UHMW HANDLE STOP
16	1	158-6416-2911	KUSTODIAN ION PC PLATE
17	1	158-1423	PLC - CPM2A 24VDC
18	1	158-8434	RECOVERY TANK ASSEMBLY - 10 GALLON
19	1	158-1438	ARC SUPPRESSOR - MOV FOR ION
20	1	153-1823	FLANGED TWISTLOCK INLET - 125V/20A
20	1	153-1826	FLANGED TWISTLOCK INLET - 250V/20A
21	1	158-8414	ASSEMBLY - BUFFER MOTOR 24VDC

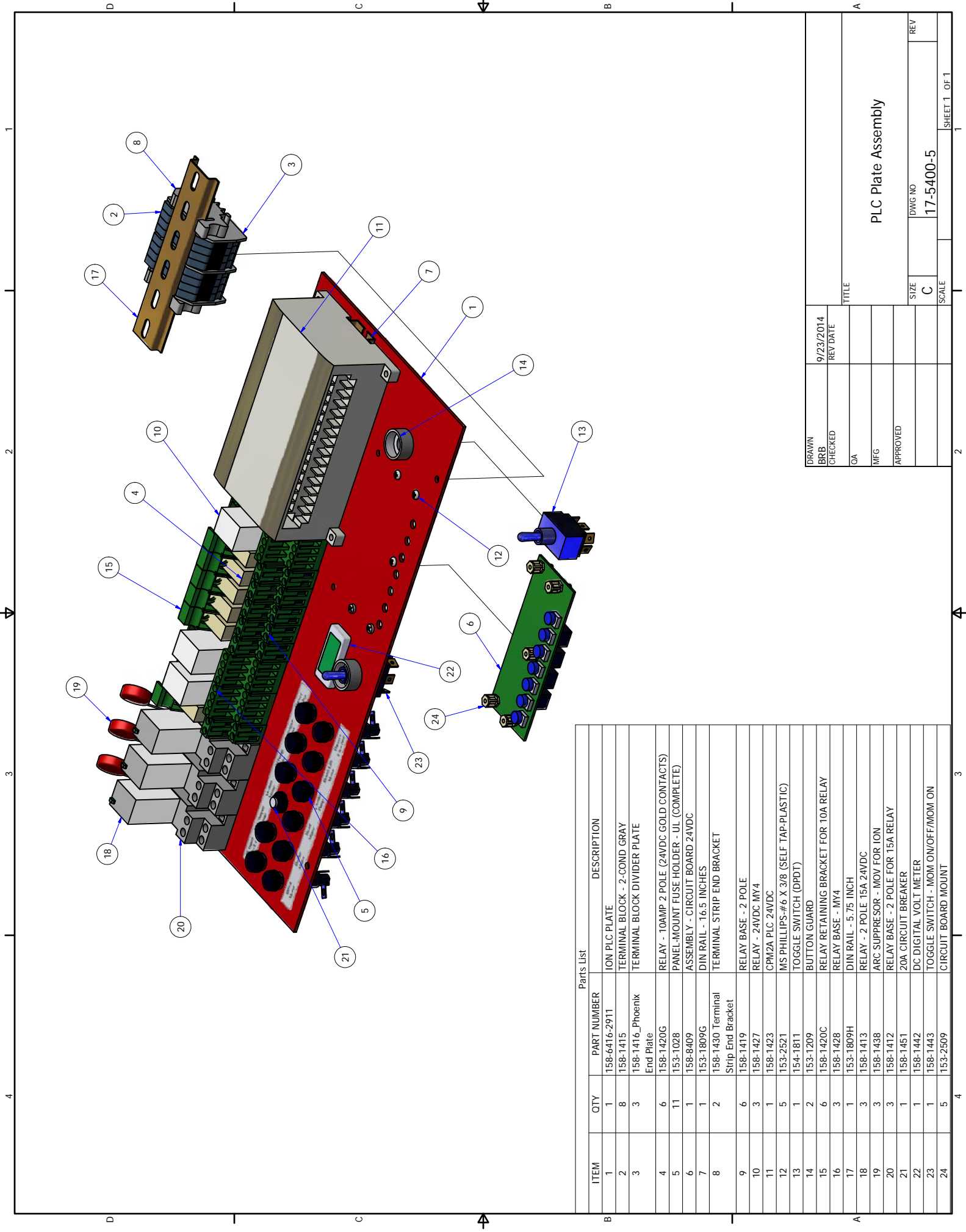
DRAWN TONYC	7/12/2006	TITLE	Kustodian Ion Model B Left View
CHECKED		DATE	
QA		DATE	
MFG	12/14/2006	DATE	
APPROVED		DATE	
SIZE	C	DWG NO	FIGURE 3
SCALE		REV	



Parts List

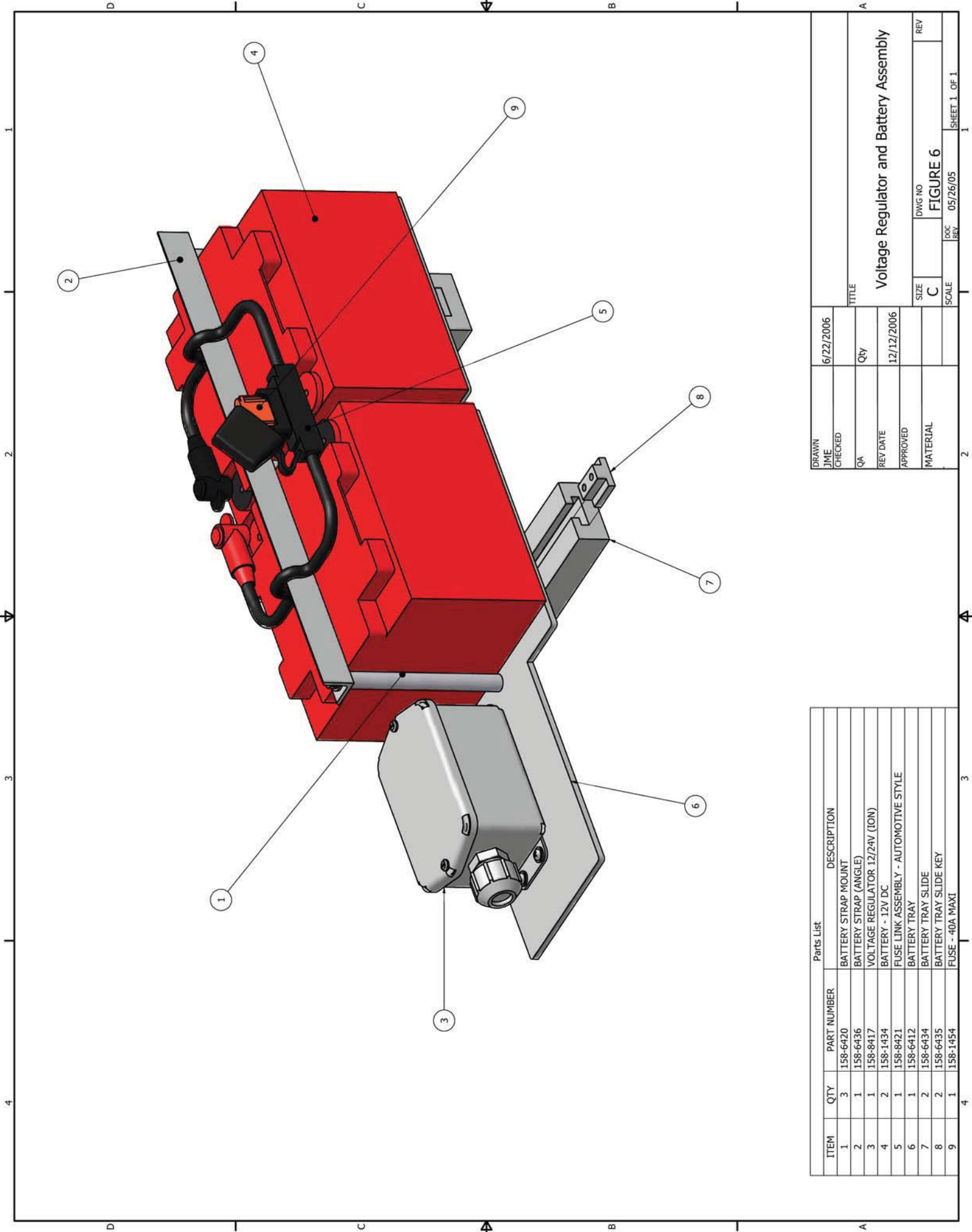
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	153-2818	HMCS - 3/8-16 X 2-1/2 (GRADE 8)
2	2	154-6042	UPMWN WHEEL - CORNER GUARD
3	4	154-6321	MOUNTING ANGLE - HEAVY CASTER (3 X 3.625)
4	1	158-6419	GUARD - RIGHT SIDE (MOLDED)
5	1	154-6875	HEAD IDLER MOUNT BLOCK
6	5	154-1220	INDUCTIVE PROXIMITY SENSOR (TL-QM5C1)
7	2	158-8402	ASSEMBLY - SQUEEGEE/BRUSH LIFT MOTOR 24VDC
8	4	158-6241	SIDE LIFT HANDLE MOUNT BAR
9	2	158-6424	SIDE LIFT HANDLE (BATTERY MACHINE)
10	1	154-6879	CLEANER HEAD DRIVE SHAFT
11	4	154-0812	TRANSPORT CASTER - 2 IN HEAVY DUTY (3/8 IN)
12	1	154-6878	CLEANER HEAD DRIVE SHAFT BLOCK
13	2	153-6029	MOMENTARY WHEEL HOUSING
14	2	154-0810	LIFTING HANDLE (SS SPRING-LOADED CHEAT)
15	2	153-8827T	1-1/4 PVC ELBOW - TANK INLET (NO THREADS)
16	2	153-1209	BUTTON GUARD
17	1	154-8824	BUTTON ASSEMBLY FOR KUSTODIAN HANDLE
18	1	154-8893	KUSTODIAN ION HANDLE ASSEMBLY
19	1	153-6437	PUSH BUTTON MOUNTING PLATE
20	1	154-6859	DRIVE MOTOR AND PARTITION WALL - ION
21	1	154-1250	EMERGENCY STOP CIRCUIT BREAKER ASSEMBLY
22	1	154-6647A	SLIDING HEAD BAR (3/8)
23	1	158-8407	ASSEMBLY - VACUUM MOTOR 24VDC
24	1	154-8806	KEYPAD ASSEMBLY FOR KUSTODIAN
25	4	153-0001	TRANSPORT CASTER (3 INCH DUAL WHEEL)
26	1	154-9402	PULLEY - 27X1.037 X 3/8 INCH BORE

DATE	1/11/2008
BY	
CHKD	
APPROVED	
TITLE	
Kustodian Ion Model B Right View	
SIZE	C
DWG NO	
CAGE	
FIGURE 4	
REV	



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	158-6416-2911	ION PLC PLATE
2	8	158-1415	TERMINAL BLOCK - 2-COND GRAY
3	3	158-1416_Phoenix	TERMINAL BLOCK DIVIDER PLATE
4	6	158-1420G	RELAY - 10AMP 2 POLE (24VDC GOLD CONTACTS)
5	11	153-1028	PANEL-MOUNT FUSE HOLDER - UL (COMPLETE)
6	1	158-8409	ASSEMBLY - CIRCUIT BOARD 24VDC
7	1	153-1809G	DIN RAIL - 16.5 INCHES
8	2	158-1430	Terminal Strip-End Bracket
9	6	158-1419	RELAY BASE - 2 POLE
10	3	158-1427	RELAY - 24VDC.MY4
11	1	158-1423	CPM2A PLC 24VDC
12	5	153-2521	MS PHILLIPS-#6 X 3/8 (SELF TAP-PLASTIC)
13	1	154-1811	TOGGLE SWITCH (DPDT)
14	2	153-1209	BUTTON GUARD
15	6	158-1420C	RELAY RETAINING BRACKET FOR 10A RELAY
16	3	158-1428	RELAY BASE - MY4
17	1	153-1809H	DIN RAIL - 5.75 INCH
18	3	158-1413	RELAY - 2 POLE 15A 24VDC
19	3	158-1438	ARC SUPPRESSOR - MOV FOR ION
20	3	158-1412	RELAY BASE - 2 POLE FOR 15A RELAY
21	1	158-1451	20A CIRCUIT BREAKER
22	1	158-1442	DC DIGITAL VOLT METER
23	1	158-1443	TOGGLE SWITCH - MOM ON/OFF/MOM ON
24	5	153-2509	CIRCUIT BOARD MOUNT

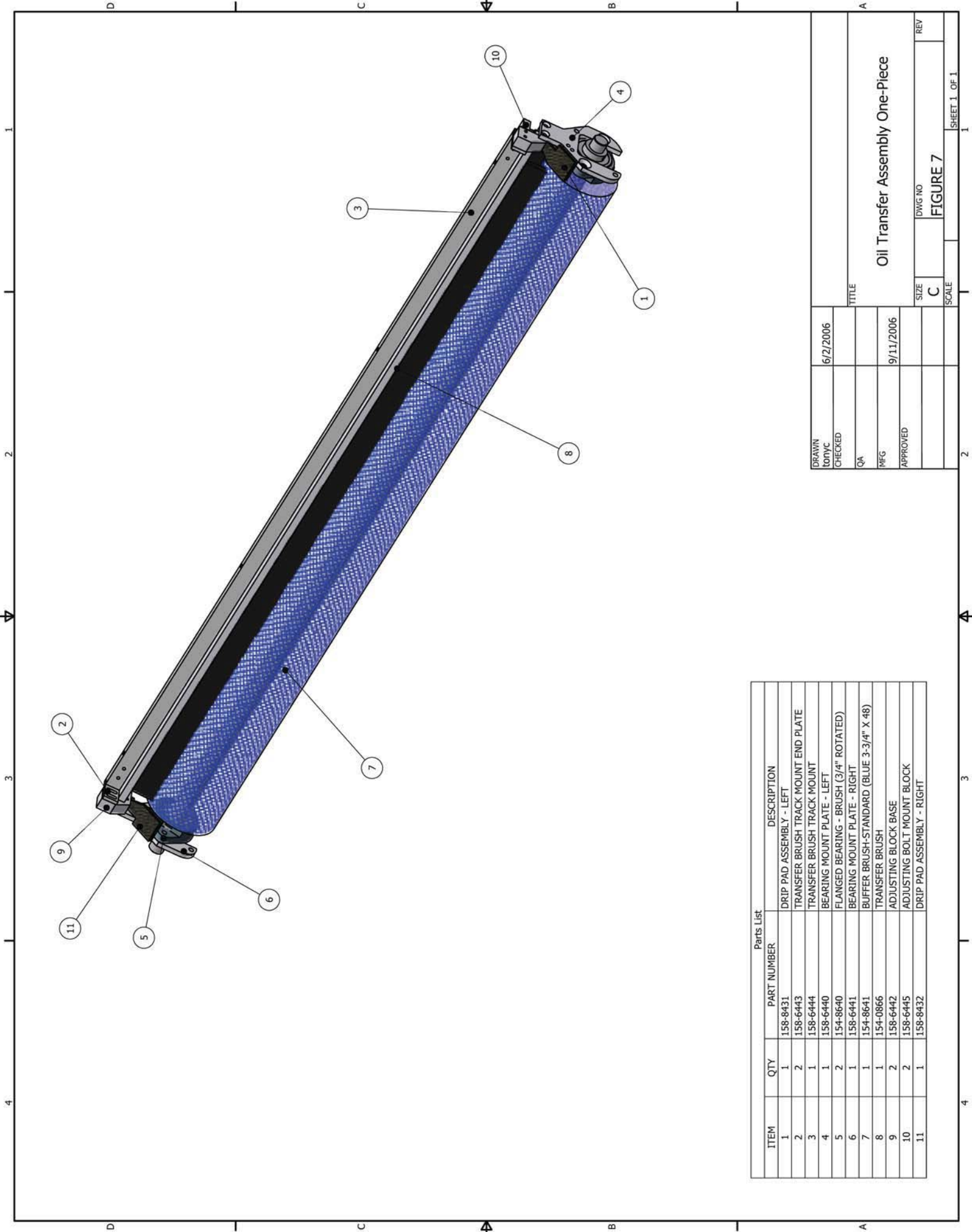
DRAWN	9/23/2014	TITLE	PLC Plate Assembly
CHECKED	BRB	REV DATE	
QA		REV	
MFG		SIZE	C
APPROVED		DWG NO	17-5400-5
		SCALE	
		SHEET 1	OF 1



ITEM	QTY	PART NUMBER	DESCRIPTION
1	3	158-6420	BATTERY STRAP MOUNT
2	1	158-6436	BATTERY STRAP (ANGLE)
3	1	158-8417	VOLTAGE REGULATOR 12/24V (ION)
4	2	158-1434	BATTERY - 12V DC
5	1	158-8421	FUSE LINK ASSEMBLY - AUTOMOTIVE STYLE
6	1	158-6412	BATTERY TRAY
7	2	158-6434	BATTERY TRAY SLIDE
8	2	158-6435	BATTERY TRAY SLIDE KEY
9	1	158-1454	FUSE - 40A MAXI

DRAWN	6/22/2006	TITLE	Voltage Regulator and Battery Assembly
JME		QTY	
CHECKED		REV DATE	12/12/2006
QA		APPROVED	
MATERIAL		SIZE	C
		DWG NO	FIGURE 6
		SCALE	05/26/05
		SHEET 1 OF 1	1

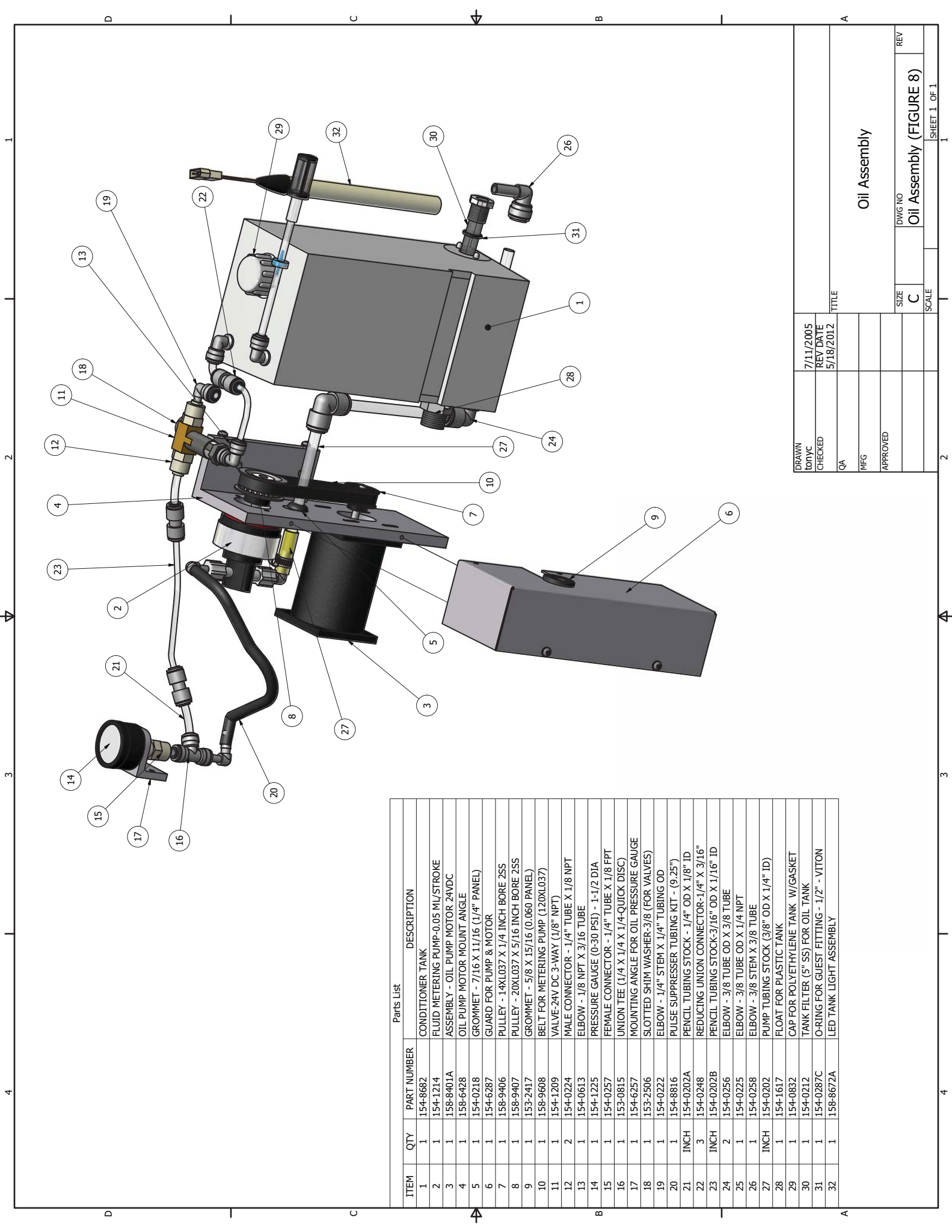




Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	158-8431	DRIP PAD ASSEMBLY - LEFT
2	2	158-6443	TRANSFER BRUSH TRACK MOUNT END PLATE
3	1	158-6444	TRANSFER BRUSH TRACK MOUNT
4	1	158-6440	BEARING MOUNT PLATE - LEFT
5	2	154-8640	FLANGED BEARING - BRUSH (3/4" ROTATED)
6	1	158-6441	BEARING MOUNT PLATE - RIGHT
7	1	154-8641	BUFFER BRUSH-STANDARD (BLUE 3-3/4" X 48)
8	1	154-0866	TRANSFER BRUSH
9	2	158-6442	ADJUSTING BOLT MOUNT BLOCK
10	2	158-6445	DRIP PAD ASSEMBLY - RIGHT
11	1	158-8432	DRIP PAD ASSEMBLY - RIGHT

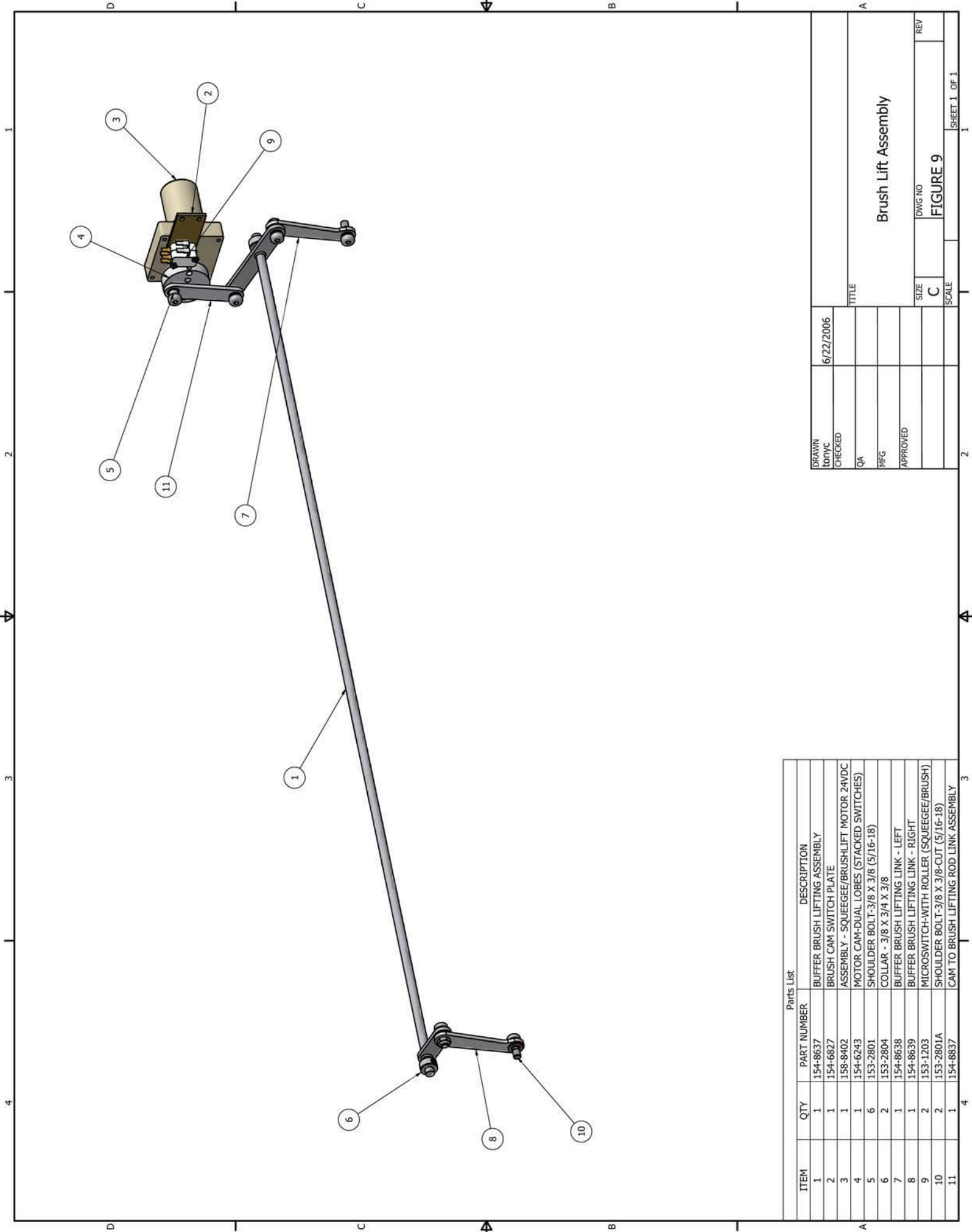
DRAWN T/ONYC	6/2/2006	TITLE	Oil Transfer Assembly One-Piece
CHECKED		DATE	
QA		DATE	
MFG	9/11/2006	DATE	
APPROVED		DATE	
SIZE	C	DWG NO	FIGURE 7
SCALE		REV	



Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	154-8682	CONDITIONER TANK
2	1	154-1214	FLUID METERING PUMP-0.05 MI/STROKE
3	1	158-8401A	ASSEMBLY - OIL PUMP MOTOR 24VDC
4	1	158-6428	OIL PUMP MOTOR MOUNT ANGLE
5	1	154-0218	GROMMET - 7/16 X 11/16 (1/4" PANEL)
6	1	154-6287	GUARD FOR PUMP & MOTOR
7	1	158-9406	PULLEY - 14XL037 X 1/4 INCH BORE 2SS
8	1	158-9407	PULLEY - 20XL037 X 5/16 INCH BORE 2SS
9	1	153-2417	GROMMET - 5/8 X 15/16 (0.060 PANEL)
10	1	158-9608	BELT FOR METERING PUMP (120XL037)
11	1	154-1209	VALVE-24V DC 3-WAY (1/8" NPT)
12	2	154-0224	MALE CONNECTOR - 1/4" TUBE X 1/8 NPT
13	1	154-0613	ELBOW - 1/8 NPT X 3/16 TUBE
14	1	154-1225	PRESSURE GAUGE (0-30 PSI) - 1-1/2 DIA
15	1	154-0257	FEMALE CONNECTOR - 1/4" TUBE X 1/8 FPT
16	1	153-0815	UNION TEE (1/4 X 1/4 X 1/4-QUICK DISC)
17	1	154-6257	MOUNTING ANGLE FOR OIL PRESSURE GAUGE
18	1	153-2506	SLOTTED SHIM WASHER-3/8 (FOR VALVES)
19	1	154-0222	ELBOW - 1/4" STEM X 1/4" TUBING OD
20	1	154-8816	PULSE SUPPRESSOR TUBING KIT - (9.25")
21	INCH	154-0202A	PENCIL TUBING STOCK - 1/4" OD X 1/8" ID
22	3	154-0248	REDUCING UNION CONNECTOR-1/4" X 3/16"
23	INCH	154-0202B	PENCIL TUBING STOCK-3/16" OD X 1/16" ID
24	2	154-0256	ELBOW - 3/8 TUBE OD X 3/8 TUBE
25	1	154-0225	ELBOW - 3/8 TUBE OD X 1/4 NPT
26	1	154-0258	ELBOW - 3/8 STEM X 3/8 TUBE
27	INCH	154-0202	PUMP TUBING STOCK (3/8" OD X 1/4" ID)
28	1	154-1617	FLOAT FOR PLASTIC TANK
29	1	154-0832	CAP FOR POLYETHYLENE TANK W/GASKET
30	1	154-0212	TANK FILTER (5" SS) FOR OIL TANK
31	1	154-0287C	O-RING FOR GUEST FITTING - 1/2" - VITON
32	1	158-8672A	LED TANK LIGHT ASSEMBLY

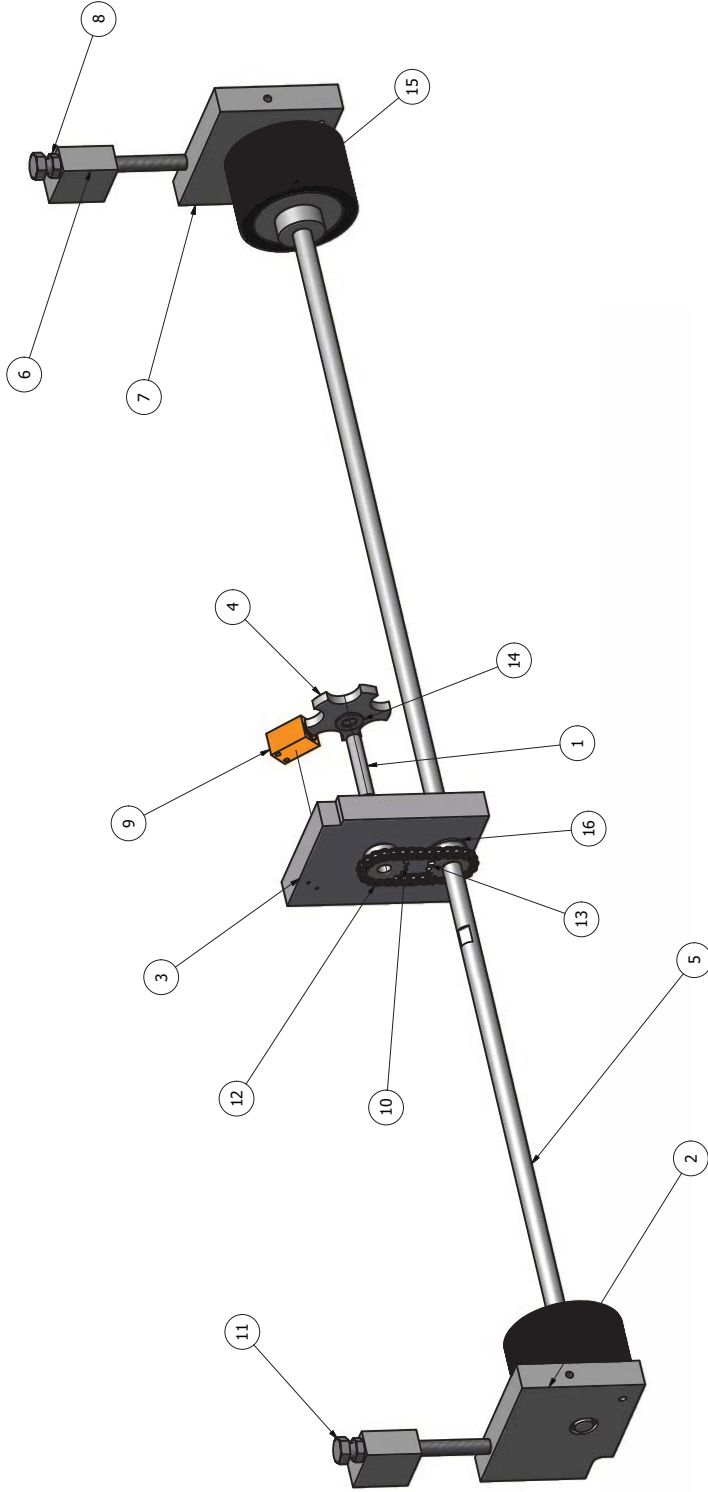
DRAWN	7/11/2005	TITLE	Oil Assembly	
CHECKED	REV DATE	SCALE	SIZE	DWG NO
QA	5/18/2012	C	C	Oil Assembly (FIGURE 8)
MFG				REV
APPROVED				SHEET 1 OF 1



Parts List

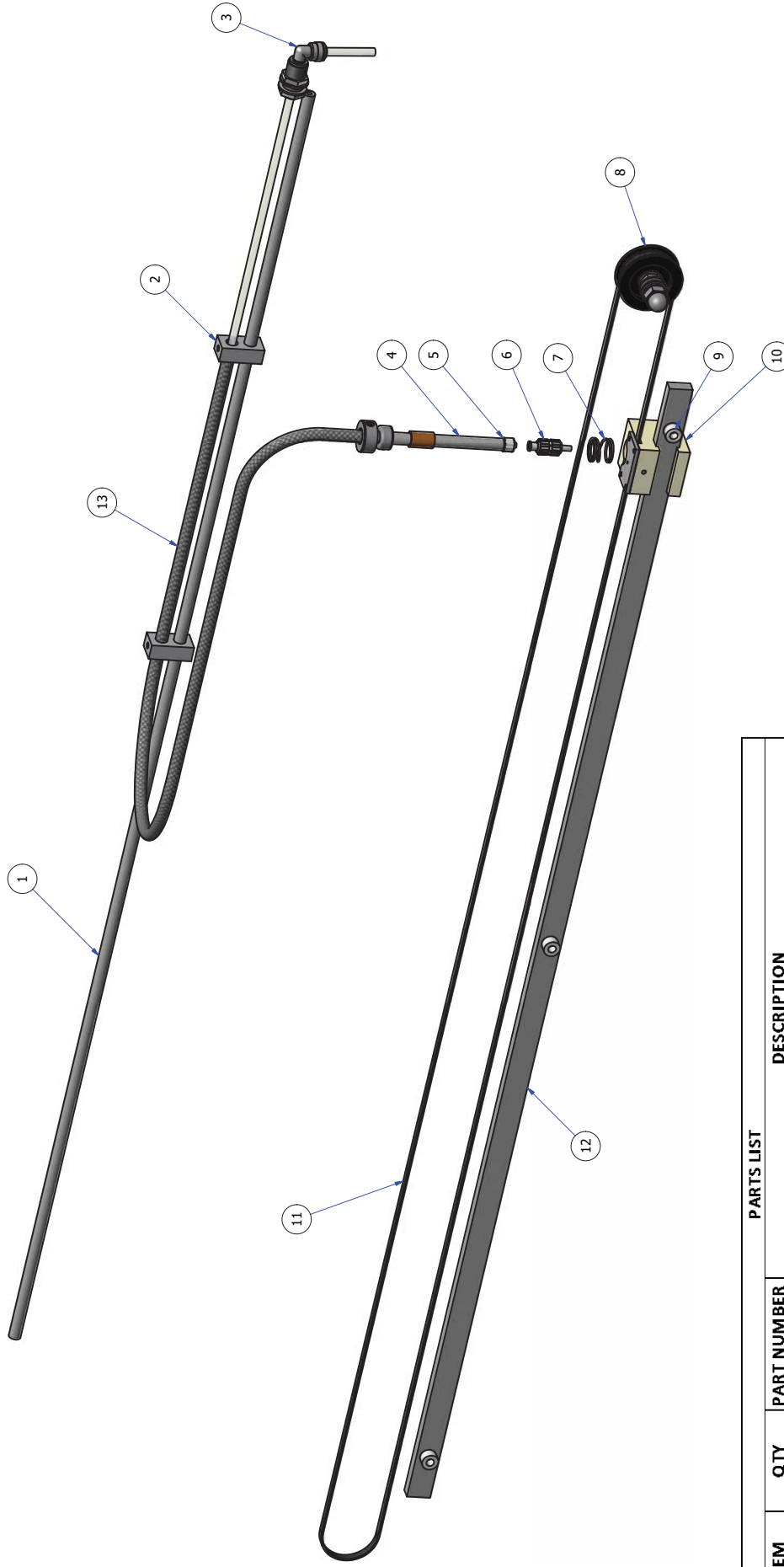
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	154-8637	BUFFER BRUSH LIFTING ASSEMBLY
2	1	154-6827	BRUSH CAM SWITCH PLATE
3	1	158-8402	ASSEMBLY - SQUEEGEE/BRUSHLIFT MOTOR 24VDC
4	1	154-6243	MOTOR CAM-DUAL LOBES (STACKED SWITCHES)
5	6	153-2801	SHOULDER BOLT-3/8 X 3/8 (5/16-18)
6	2	153-2804	COLLAR - 3/8 X 3/4 X 3/8
7	1	154-8638	BUFFER BRUSH LIFTING LINK - LEFT
8	1	154-8639	BUFFER BRUSH LIFTING LINK - RIGHT
9	2	153-1203	MICROSWITCH-WITH ROLLER (SQUEEGEE/BRUSH)
10	2	153-2801A	SHOULDER BOLT-3/8 X 3/8-CUT (5/16-18)
11	1	154-8837	CAM TO BRUSH LIFTING ROD LINK ASSEMBLY

DRAWN TONYC	6/22/2006	TITLE	Brush Lift Assembly
CHECKED		SIZE	C
QA		SCALE	
MFG		DWG NO	FIGURE 9
APPROVED		REV	
		SHEET 1 OF 1	



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	154-6264	SHAFT FOR TIMING DISK (REMOTE SENSOR)
2	1	154-8621	PILLOWBLOCK-LANE DISTANCE (RIGHT-FLANGE)
3	1	154-8320	PILLOWBLOCK - LANE DISTANCE (CENTER-PLAIN)
4	1	154-6717	5-TOOTH SENSOR DISK (3/8 BORE)
5	1	154-6821	LDS SHAFT - KUSTODIAN
6	2	153-6027	LANE DISTANCE ADJUSTMENT BLOCK
7	1	154-8619	PILLOWBLOCK-LANE DISTANCE (LEFT-FLANGED)
8	1	153-2027	JAM NUT - 3/8-16
9	1	154-1220	INDUCTIVE PROXIMITY SENSOR
10	1	154-9211	LDS AND TACH SENSOR DRIVE CHAIN (25P29)
11	2	153-2234	HHCS - 3/8-16 X 4 (FULL THREAD)
12	1	153-9010	SPROCKET-25B15 (3/8") 1/4-20 SET
13	1	154-9213	SPROCKET-25B15 (1/2") 1/4-20 SET SCREW
14	4	153-2009	NYLON FLAT WASHER (3/8 - 0.060)
15	2	153-7002AA	LANE DISTANCE COUNTER WHEEL - TREADED (2")
16	1	153-2992	WAVE WASHER

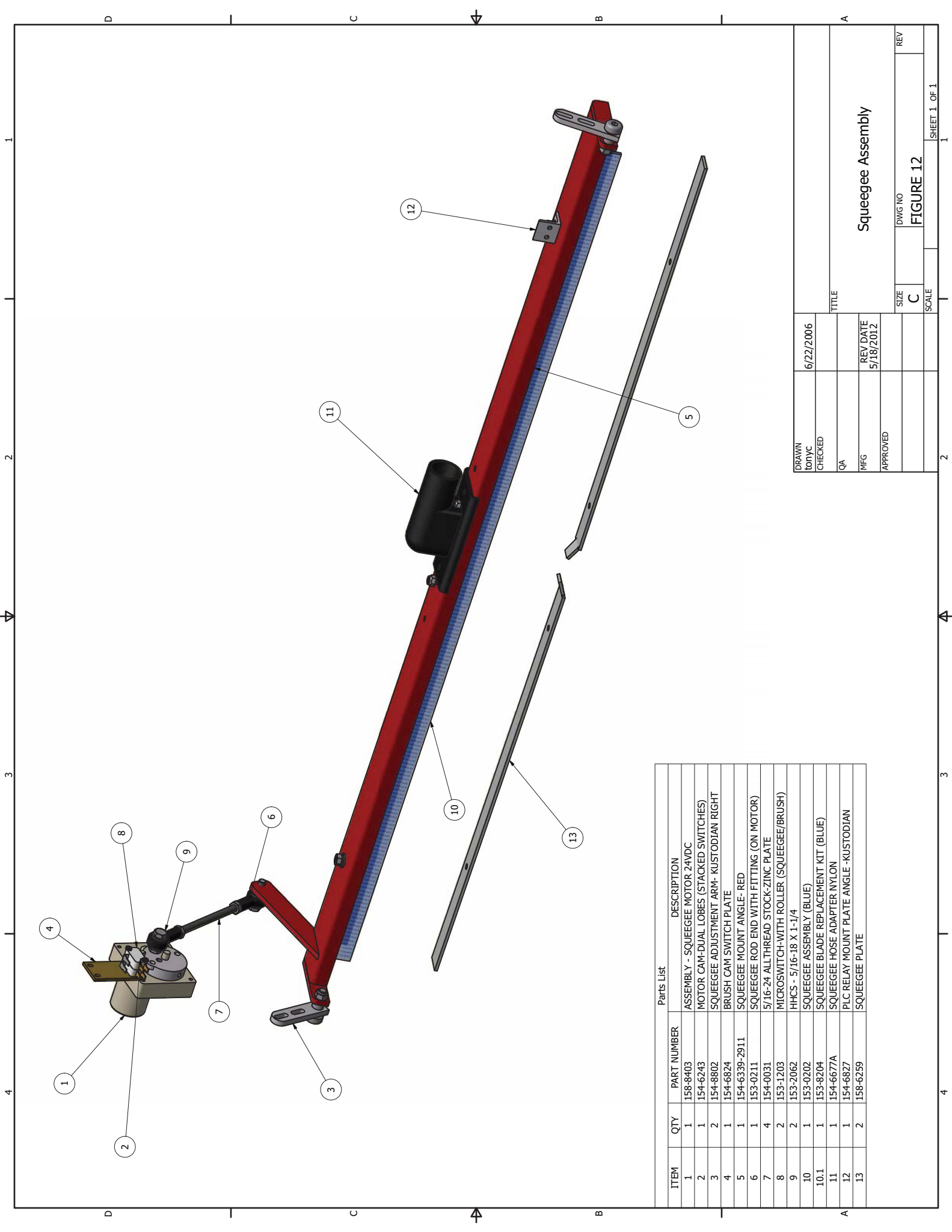
DRAWN tonyc	7/11/2005	TITLE	LDS Assembly
CHECKED		REV	
QA		REV DATE	5/18/2012
MFG		SIZE	C
APPROVED		SCALE	
		DWG NO	FIGURE 10
		SCALE	
		REV	



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	154-6889	CLEANER HOSE ROUTING BAR
2	2	154-6888	CLEANER HOSE SPRING MOUNT BLOCK
3	1	154-0222	ELBOW 1/4" STEM X 1/4" TUBING OD
4	1	154-8852	CLEANER HOSE TUBE (4.5 INCH) AND TIP ASSEMBLY
5	1	154-0863	MALE LUER TO HOSE BARB
6	1	164-0012M	CLEANER TIP WITH CHECK VALVE
7	1	153-2713	SPRING - OIL TIP RETAINER
8	1	154-9802	PULLEY 27XLO37 DF 2SETS 3/8" BORE
9	3	154-6874	CLEANING HEAD BAR SPACER
10	1	154-6882	CLEANER HEAD
11	1	154-9201	CLEANER HEAD DRIVE BELT
12	1	154-6877	CLEANER HEAD GUIDE BAR
13	1	154-0867	CLEANER HOSE SPRING (3.6")

PARTS LIST

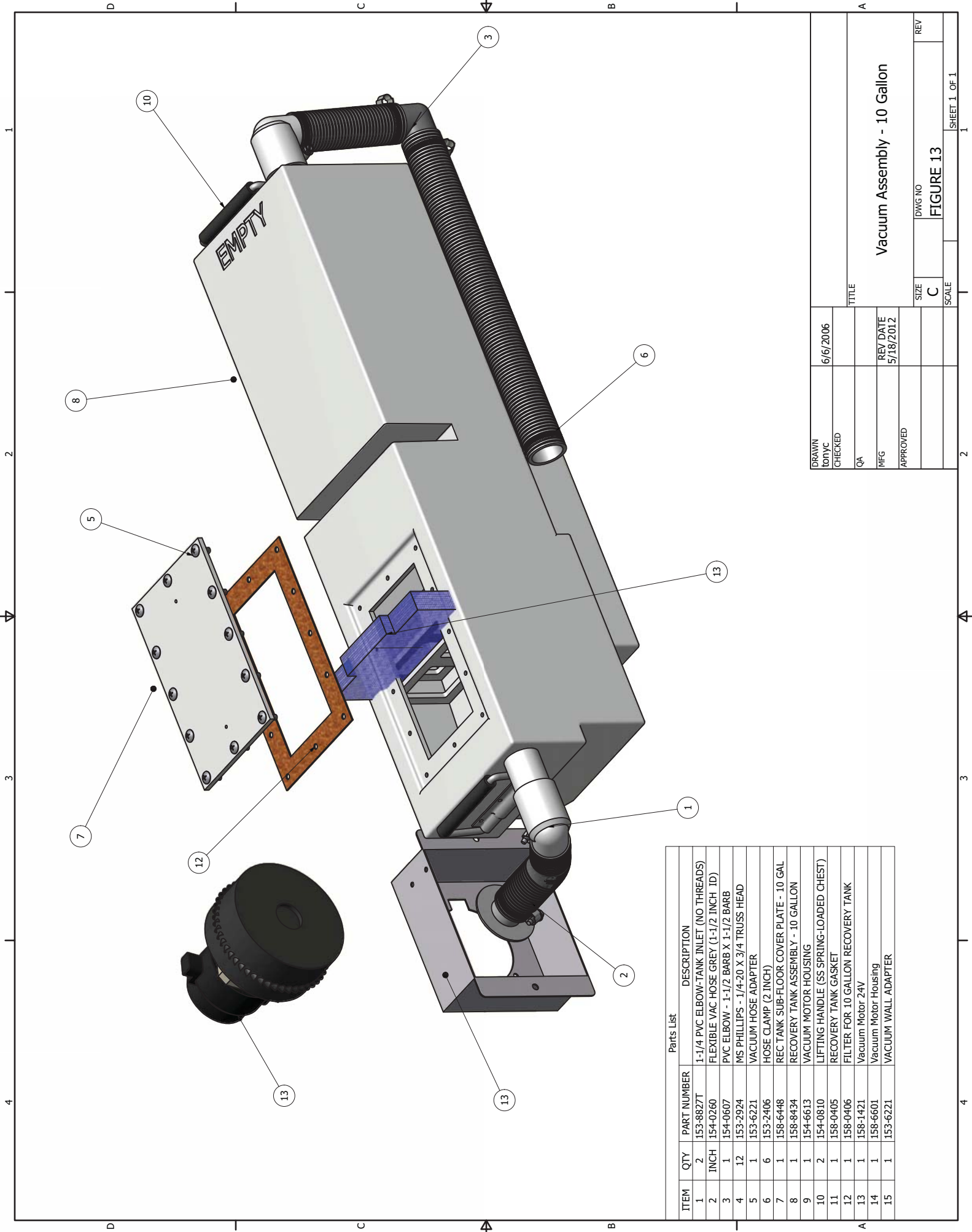
DRAWN	4/10/2014	TITLE	Cleaner Head Assembly
CHECKED		SIZE	C
QA		DWG NO	17-5400-12
MFG		REV	
APPROVED		SCALE	1
REV. 11/19/2012		SHEET 1 OF 1	



Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	158-8403	ASSEMBLY - SQUEEGEE MOTOR 24VDC
2	1	154-6243	MOTOR CAM-DUAL LOBBES (STACKED SWITCHES)
3	2	154-8802	SQUEEGEE ADJUSTMENT ARM- KUSTODIAN RIGHT
4	1	154-6824	BRUSH CAM SWITCH PLATE
5	1	154-6339-2911	SQUEEGEE MOUNT ANGLE- RED
6	1	153-0211	SQUEEGEE ROD END WITH FITTING (ON MOTOR)
7	4	154-0031	5/16-24 ALL THREAD STOCK-ZINC PLATE
8	2	153-1203	MICROSWITCH-WITH ROLLER (SQUEEGEE/BRUSH)
9	2	153-2062	HHCS - 5/16-18 X 1-1/4
10	1	153-0202	SQUEEGEE ASSEMBLY (BLUE)
10.1	1	153-8204	SQUEEGEE BLADE REPLACEMENT KIT (BLUE)
11	1	154-6677A	SQUEEGEE HOSE ADAPTER NYLON
12	1	154-6827	PLC RELAY MOUNT PLATE ANGLE -KUSTODIAN
13	2	158-6259	SQUEEGEE PLATE

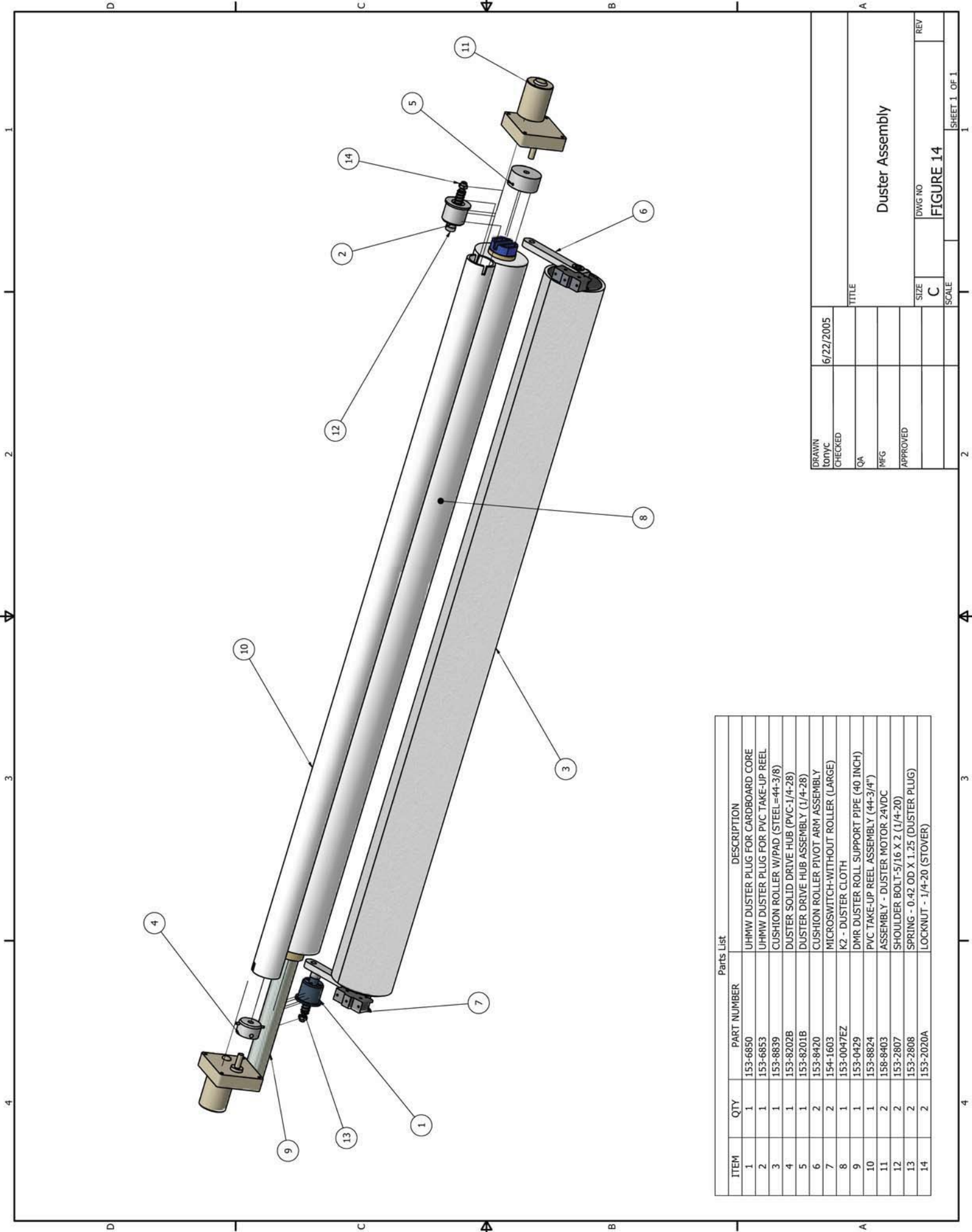
DRAWN	6/22/2006	TITLE	Squeegee Assembly	
CHECKED		REV	DWG NO	FIGURE 12
QA		REV DATE	SCALE	
MFG		5/18/2012	C	
APPROVED				



Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	153-8827T	1-1/4 PVC ELBOW-TANK INLET (NO THREADS)
2	1	154-0260	FLEXIBLE VAC HOSE GREY (1-1/2 INCH ID)
3	1	154-0607	PVC ELBOW - 1-1/2 BARB X 1-1/2 BARB
4	12	153-2924	MS PHILLIPS - 1/4-20 X 3/4 TRUSS HEAD
5	1	153-6221	VACUUM HOSE ADAPTER
6	6	153-2406	HOSE CLAMP (2 INCH)
7	1	158-6448	REC TANK SUB-FLOOR COVER PLATE - 10 GAL
8	1	158-8434	RECOVERY TANK ASSEMBLY - 10 GALLON
9	1	154-6613	VACUUM MOTOR HOUSING
10	2	154-0810	LIFTING HANDLE (SS SPRING-LOADED CHEST)
11	1	158-0405	RECOVERY TANK GASKET
12	1	158-0406	FILTER FOR 10 GALLON RECOVERY TANK
13	1	158-1421	Vacuum Motor 24V
14	1	158-6601	Vacuum Motor Housing
15	1	153-6221	VACUUM WALL ADAPTER

DRAWN tonyc	6/6/2006	TITLE	Vacuum Assembly - 10 Gallon
CHECKED		REV DATE	5/18/2012
QA		SIZE	C
MFG		SCALE	
APPROVED		DWG NO	FIGURE 13
		REV	

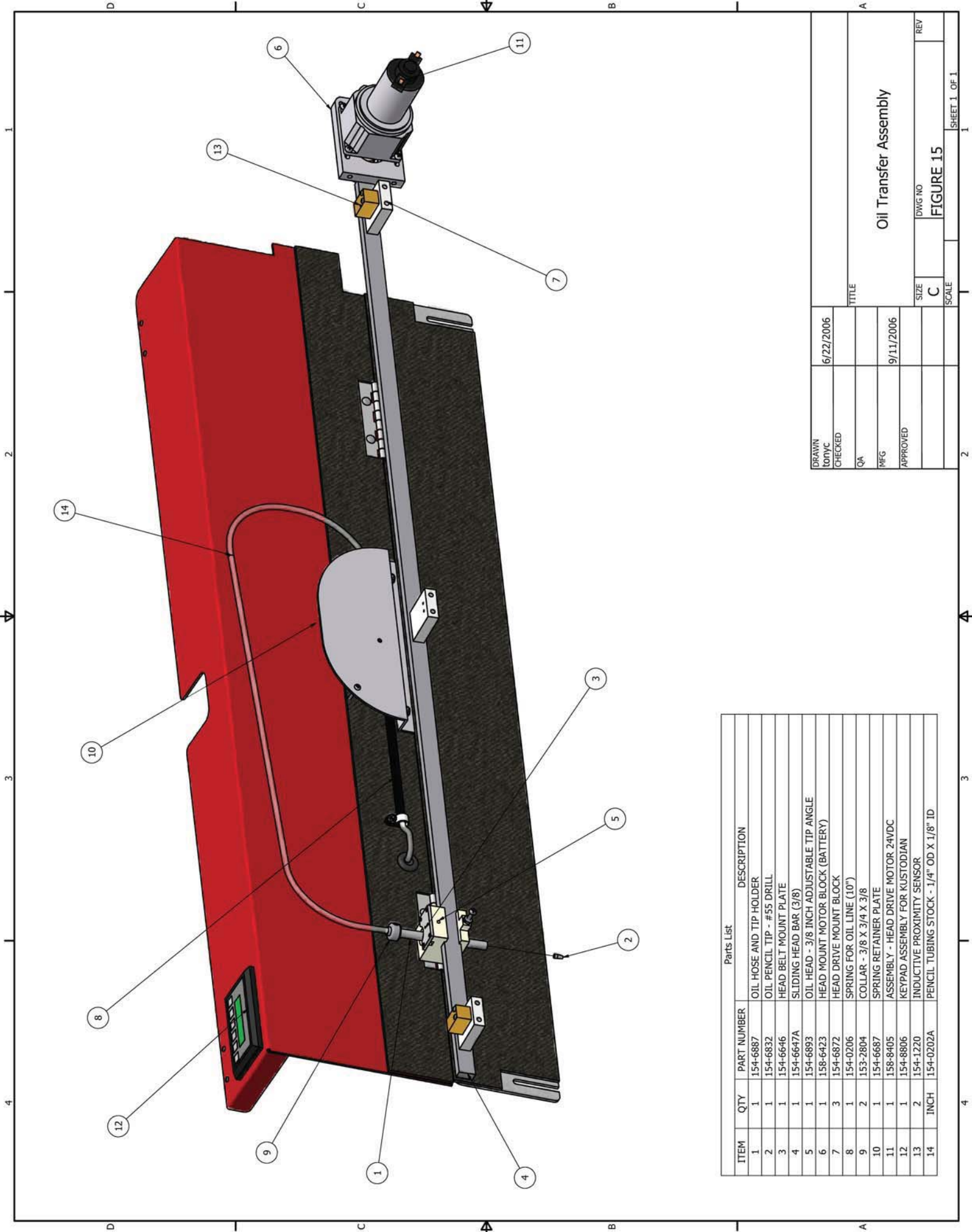


Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	153-6850	UHMW DUSTER PLUG FOR CARDBOARD CORE
2	1	153-6853	UHMW DUSTER PLUG FOR PVC TAKE-UP REEL
3	1	153-8839	CUSHION ROLLER W/PAD (STEEL=44-3/8)
4	1	153-8202B	DUSTER SOLID DRIVE HUB (PVC-1/4-28)
5	1	153-8201B	DUSTER DRIVE HUB ASSEMBLY (1/4-28)
6	2	153-8420	CUSHION ROLLER PIVOT ARM ASSEMBLY
7	2	154-1603	MICROSWITCH-WITHOUT ROLLER (LARGE)
8	1	153-0047EZ	K2 - DUSTER CLOTH
9	1	153-0429	DMR DUSTER ROLL SUPPORT PIPE (40 INCH)
10	1	153-8824	PVC TAKE-UP REEL ASSEMBLY (44-3/4")
11	2	158-8403	ASSEMBLY - DUSTER MOTOR 24VDC
12	2	153-2807	SHOULDER BOLT-5/16 X 2 (1/4-20)
13	2	153-2808	SPRING - 0.42 OD X 1.25 (DUSTER PLUG)
14	2	153-2020A	LOCKNUT - 1/4-20 (STOVER)

DRAWN	6/22/2005	TITLE	Duster Assembly
CHECKED		QA	
		MFG	
		APPROVED	
		SIZE	C
		DWG NO	FIGURE 14
		SCALE	
		REV	

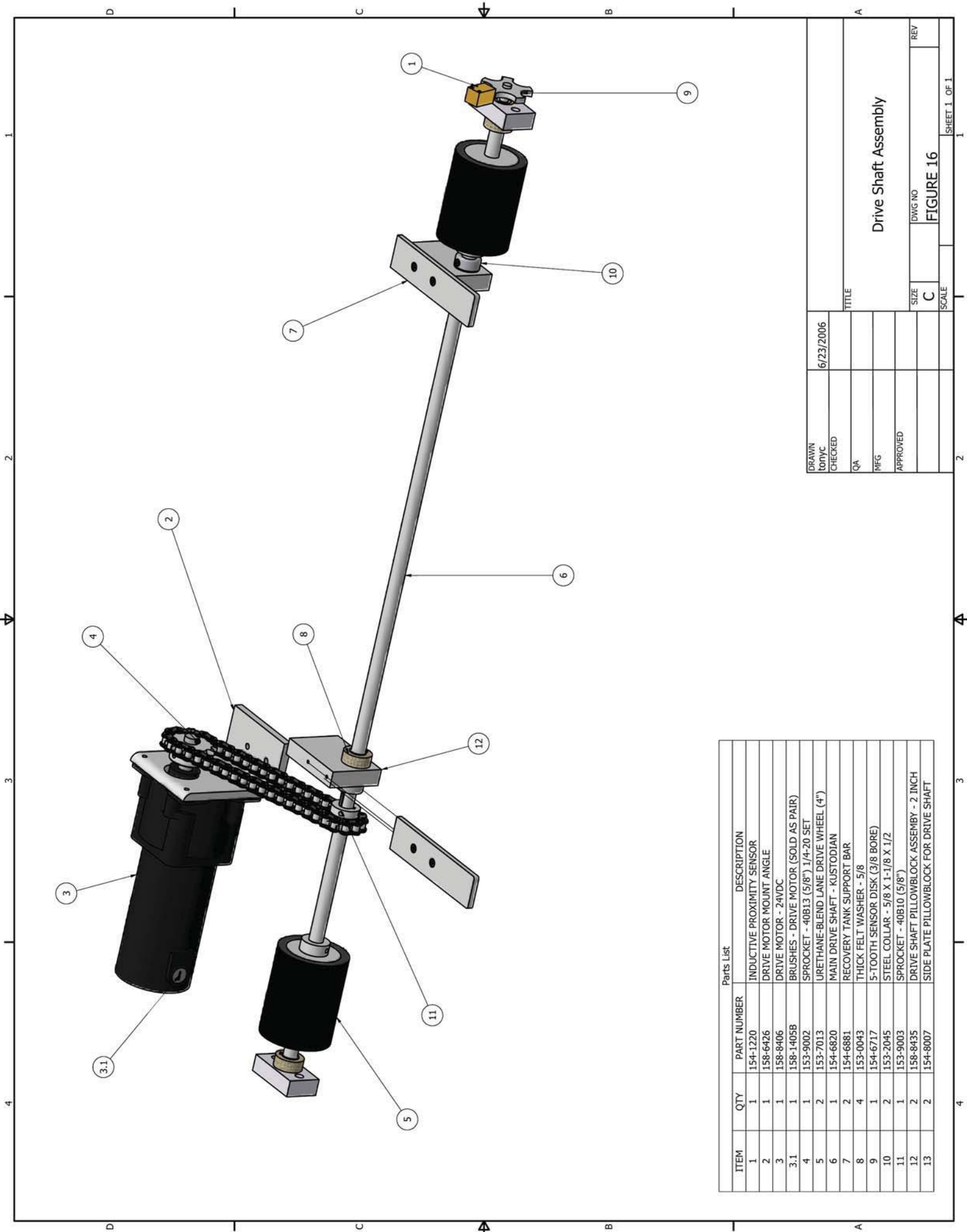




Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	154-6887	OIL HOSE AND TIP HOLDER
2	1	154-6832	OIL PENCIL TIP - #55 DRILL
3	1	154-6646	HEAD BELT MOUNT PLATE
4	1	154-6647A	SLIDING HEAD BAR (3/8)
5	1	154-6893	OIL HEAD - 3/8 INCH ADJUSTABLE TIP ANGLE
6	1	158-6423	HEAD MOUNT MOTOR BLOCK (BATTERY)
7	3	154-6872	HEAD DRIVE MOUNT BLOCK
8	1	154-0206	SPRING FOR OIL LINE (10")
9	2	153-2804	COLLAR - 3/8 X 3/4 X 3/8
10	1	154-6687	SPRING RETAINER PLATE
11	1	158-8405	ASSEMBLY - HEAD DRIVE MOTOR 24VDC
12	1	154-8806	KEYPAD ASSEMBLY FOR KUSTODIAN
13	2	154-1220	INDUCTIVE PROXIMITY SENSOR
14	INCH	154-0202A	PENCIL TUBING STOCK - 1/4" OD X 1/8" ID

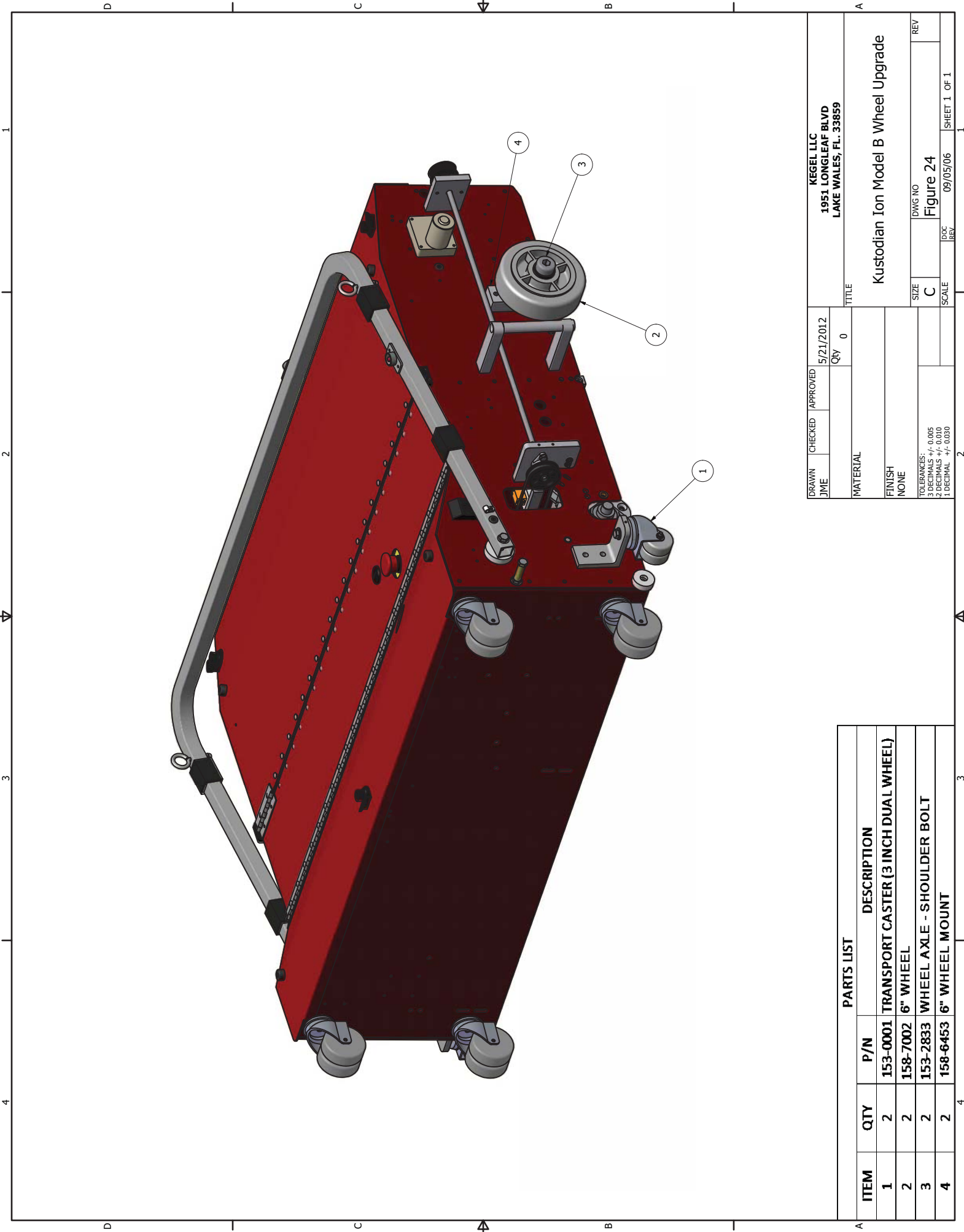
DRAWN TONYC	6/22/2006	TITLE	Oil Transfer Assembly
CHECKED		DATE	9/11/2006
QA		SCALE	C
MFG		DWG NO	FIGURE 15
APPROVED		REV	



Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	154-1220	INDUCTIVE PROXIMITY SENSOR
2	1	158-6426	DRIVE MOTOR MOUNT ANGLE
3	1	158-8406	DRIVE MOTOR - 24VDC
3.1	1	158-1405B	BRUSHES - DRIVE MOTOR (SOLD AS PAIR)
4	1	153-9002	SPROCKET - 40B13 (5/8") 1/4-20 SET
5	2	153-7013	URETHANE-BLEND LANE DRIVE WHEEL (4")
6	1	154-6820	MAIN DRIVE SHAFT - KUSTODIAN
7	2	154-6881	RECOVERY TANK SUPPORT BAR
8	4	153-0043	THICK FELT WASHER - 5/8
9	1	154-6717	5-TOOTH SENSOR DISK (3/8 BORE)
10	2	153-2045	STEEL COLLAR - 5/8 X 1-1/8 X 1/2
11	1	153-9003	SPROCKET - 40B10 (5/8")
12	2	158-8435	DRIVE SHAFT PILLOWBLOCK ASSEMBLY - 2 INCH
13	2	154-8007	SIDE PLATE PILLOWBLOCK FOR DRIVE SHAFT

DRAWN	6/23/2006	TITLE	Drive Shaft Assembly
CHECKED		QA	
		MFG	
		APPROVED	
		SIZE	C
		DWG NO	FIGURE 16
		SCALE	
		REV	



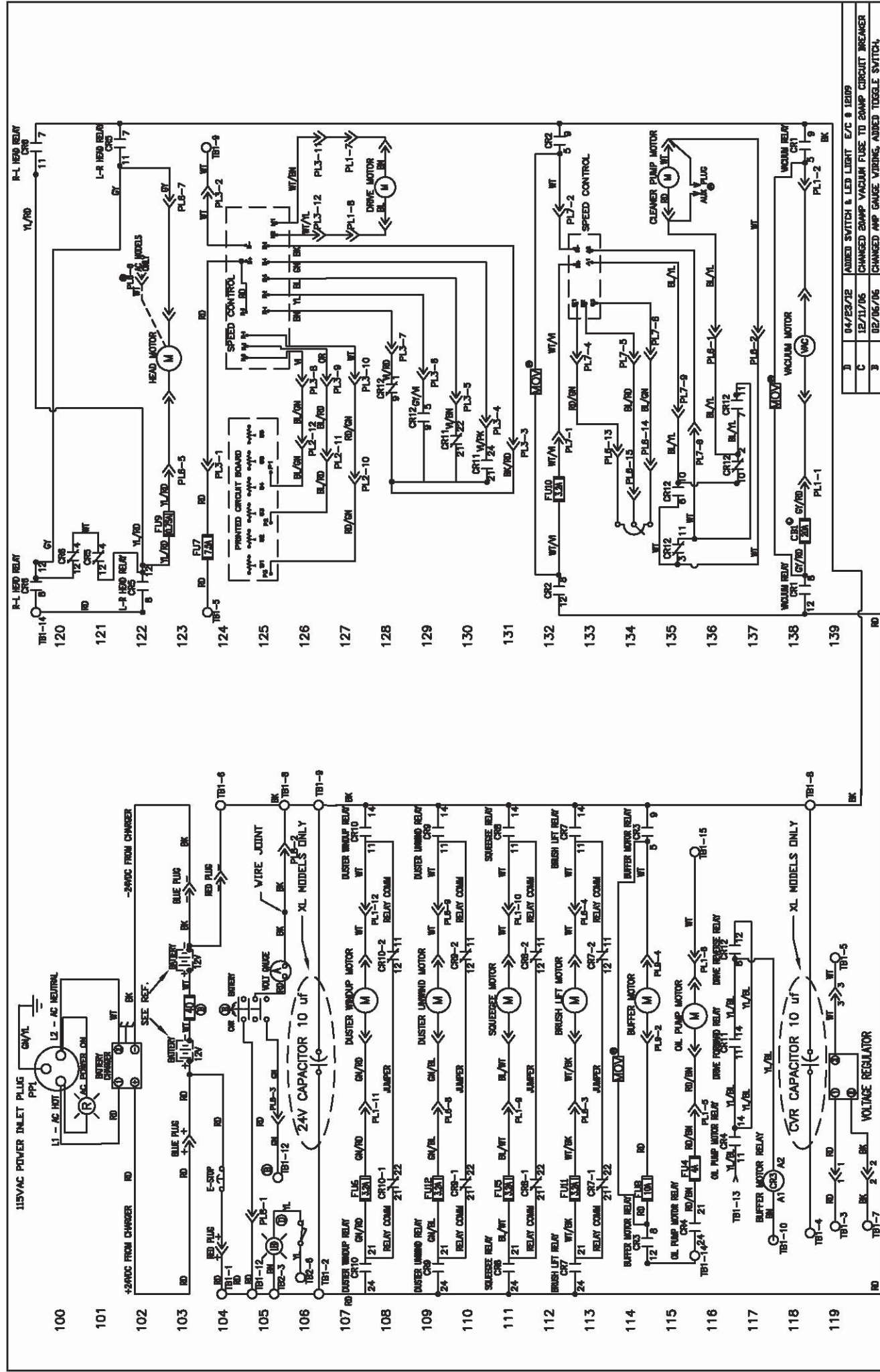
DRAWN JME	CHECKED	APPROVED 5/21/2012	QTY 0	KEGEL LLC 1951 LONGLEAF BLVD LAKE WALES, FL. 33859
MATERIAL				TITLE Kustodian Ion Model B Wheel Upgrade
FINISH NONE				SIZE C
TOLERANCES: 3 DECIMALS +/- 0.005 2 DECIMALS +/- 0.010 1 DECIMAL +/- 0.030				DWG NO Figure 24
SCALE				DOC REV 09/05/06
				REV SHEET 1 OF 1

PARTS LIST		
ITEM	QTY	P/N DESCRIPTION
1	2	153-0001 TRANSPORT CASTER (3 INCH DUAL WHEEL)
2	2	158-7002 6" WHEEL
3	2	153-2833 WHEEL AXLE - SHOULDER BOLT
4	2	158-6453 6" WHEEL MOUNT

## Kustodian ION Wiring Diagrams

The following diagrams show wiring schematics for this lane machine. If you have any questions please call 863-734-0200 or email [tech@kegel.net](mailto:tech@kegel.net) .

Main Wiring .....	133
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**LEGEND**

- PL1 - MAIN PLUG - RIGHT SIDE (S)
- PL2 - CIRCUIT BOARD PLUG (G)
- PL3 - DC SPEED BOARD PLUG (G)
- PL4 - PLC INPUT PLUG (RIGHT-S)
- PL5 - PLC INPUT PLUG (LEFT-S)
- PL6 - MAIN PLUG - LEFT SIDE (S)
- PL7 - WATER PUMP SPEED BOARD (S)
- PL8 - AMP GAUGE (S)
- PL9 - BUFFER MOTOR (S)
- TB1 - TERMINAL BLOCK 1 (MAIN)
- TB2 - TERMINAL BLOCK 2 (OIL ASSY)
- TB3 - TERMINAL BLOCK 3 (LEFT SIDE)
- TB4 - TERMINAL BLOCK 4 (HANDLE)
- PL1 - CHARGING PLUG (S)
- CR1 - VACUUM RELAY
- CR2 - CLEANER MOTOR RELAY
- CR3 - BUFFER MOTOR RELAY
- CR4 - OIL PUMP MOTOR RELAY
- CR5 - L-R HEAD RELAY
- CR6 - L-R HEAD RELAY
- CR7 - BRUSH LIFT RELAY
- CR8 - SQUEEZE MOTOR RELAY
- CR9 - UNWIND RELAY
- CR10 - WINDUP RELAY
- CR11 - FORWARD RELAY
- CR12 - REVERSE RELAY
- FUS - VACUUM MOTOR 20A 0
- FUL - PLC INPUT POWER 0.5A
- FUG - PLC OUTPUT COMMONS 0.5A
- FU4 - OIL PUMP MOTOR 4A
- FU5 - SQUEEZE MOTOR 3.2A
- FU6 - WINDUP MOTOR 3.2A
- FU7 - BRUSH LIFT MOTOR 10A
- FU8 - HEAD MOTOR 0.75A
- FU9 - CLEANER MOTOR 3.2A
- FU10 - FORWARD RELAY 3.2A
- FU11 - BRUSH LIFT MOTOR 3.2A
- FU12 - UNWIND MOTOR 3.2A

**VIEW OF CONTROL BOARD**

- 9 PINOUT
- 12 PINOUT
- 16 PINOUT

**REV LTR DATE DESCRIPTION**

3	04/23/28	ADDED SWITCH & LED LIGHT ETC 8 LEADS
C	12/11/06	CHANGED RAMP VACUUM FUSE TO RAMP CIRCUIT BREAKER
3	02/06/06	CHANGED AMP GAUGE VIBRING, ADDED TOGGLE SWITCH, ADDED FUSE
A	09/06/05	ADDED MOV, CHANGED PLUG NUMBER, CHANGED NAME, ADDED MAIN PLUG & ADDED AC MODEL PLUG

**MATERIAL**

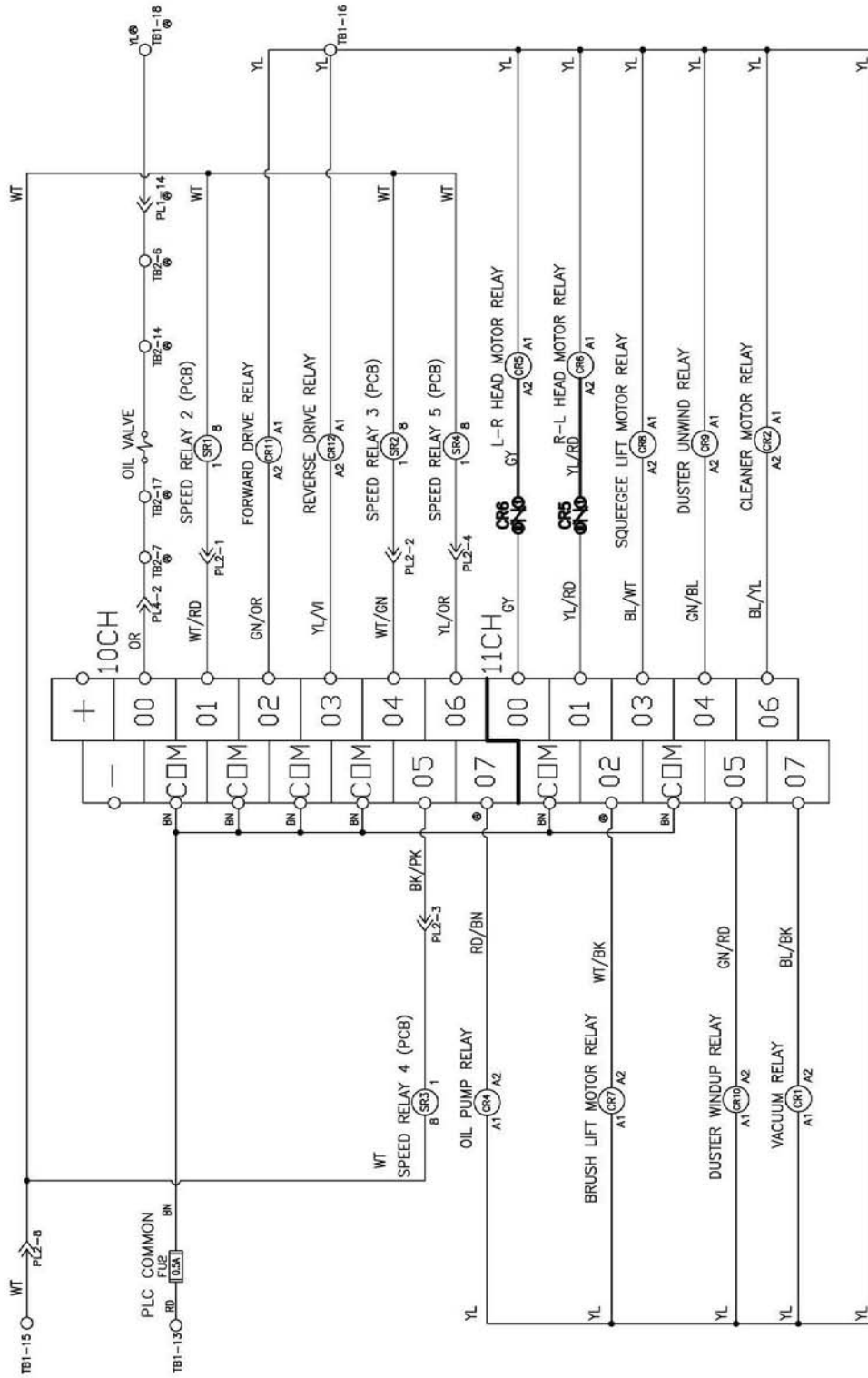
REV	DATE	DESCRIPTION
NA	08/5/05	NA
B	09/12/06	NA
C	09/12/06	NA
NA	09/12/06	NA
NA	09/12/06	NA

**DESCRIPTION**

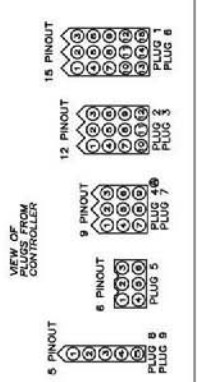
KEGEL  
KUSTODIAN ION (MODEL B)  
MAIN WIRING SCHEMATIC  
REV 09/12/06  
DRAWN BY JAMES WALKER, JR.  
CHECKED BY JAMES WALKER, JR.  
(040) 700-0000

REV: 1 OF 4

OMRON  
SYM2AC  
CPM2A  
OUTPUTS



- LEGEND**
- PL1 - MAIN PLUG - RIGHT SIDE (15)
  - PL2 - CIRCUIT BOARD PLUG (12)
  - PL3 - DC SPEED BOARD PLUG (12)
  - PL4 - PLC INPUT PLUG (RIGHT-9)
  - PL5 - PLC INPUT PLUG (LEFT-6)
  - PL6 - MAIN PLUG - LEFT SIDE (15)
  - PL7 - WATER PUMP SPEED BOARD (9)
  - PL8 - AMP GAUGE (5)
  - PL9 - BUFFER MOTOR (5)
  - TB1 - TERMINAL BLOCK 1 (MAIN)
  - TB2 - TERMINAL BLOCK 2 (COIL ASSY)
  - TB3 - TERMINAL BLOCK 3 (LEFT SIDE)
  - TB4 - TERMINAL BLOCK 4 (HANDLE)
  - PP1 - CHARGING PLUG 6
  - CR1 - VACUUM RELAY
  - CR2 - CLEANER MOTOR RELAY
  - CR3 - BUFFER MOTOR RELAY
  - CR4 - OIL PUMP MOTOR RELAY
  - CR5 - L-R HEAD RELAY
  - CR6 - R-L HEAD RELAY
  - CR7 - BRUSH LIFT RELAY
  - CR8 - SQUEEGEE MOTOR RELAY
  - CR9 - UNWIND RELAY
  - CR10 - WINDUP RELAY
  - CR11 - FORWARD RELAY
  - CR12 - REVERSE RELAY
  - FU1 - VACUUM MOTOR 20A
  - FU2 - PLC INPUT POWER 0.5A
  - FU3 - PLC OUTPUT COMMONS 0.5A
  - FU4 - OIL PUMP MOTOR 4A
  - FU5 - SQUEEGEE MOTOR 3.2A
  - FU6 - WINDUP MOTOR 7.5A
  - FU7 - DRIVE MOTOR 10A
  - FU8 - BUFFER MOTOR 0.75A
  - FU9 - HEAD MOTOR 3.2A
  - FU10 - CLEANER MOTOR 3.2A
  - FU11 - BRUSH LIFT MOTOR 3.2A
  - FU12 - UNWIND MOTOR 3.2A

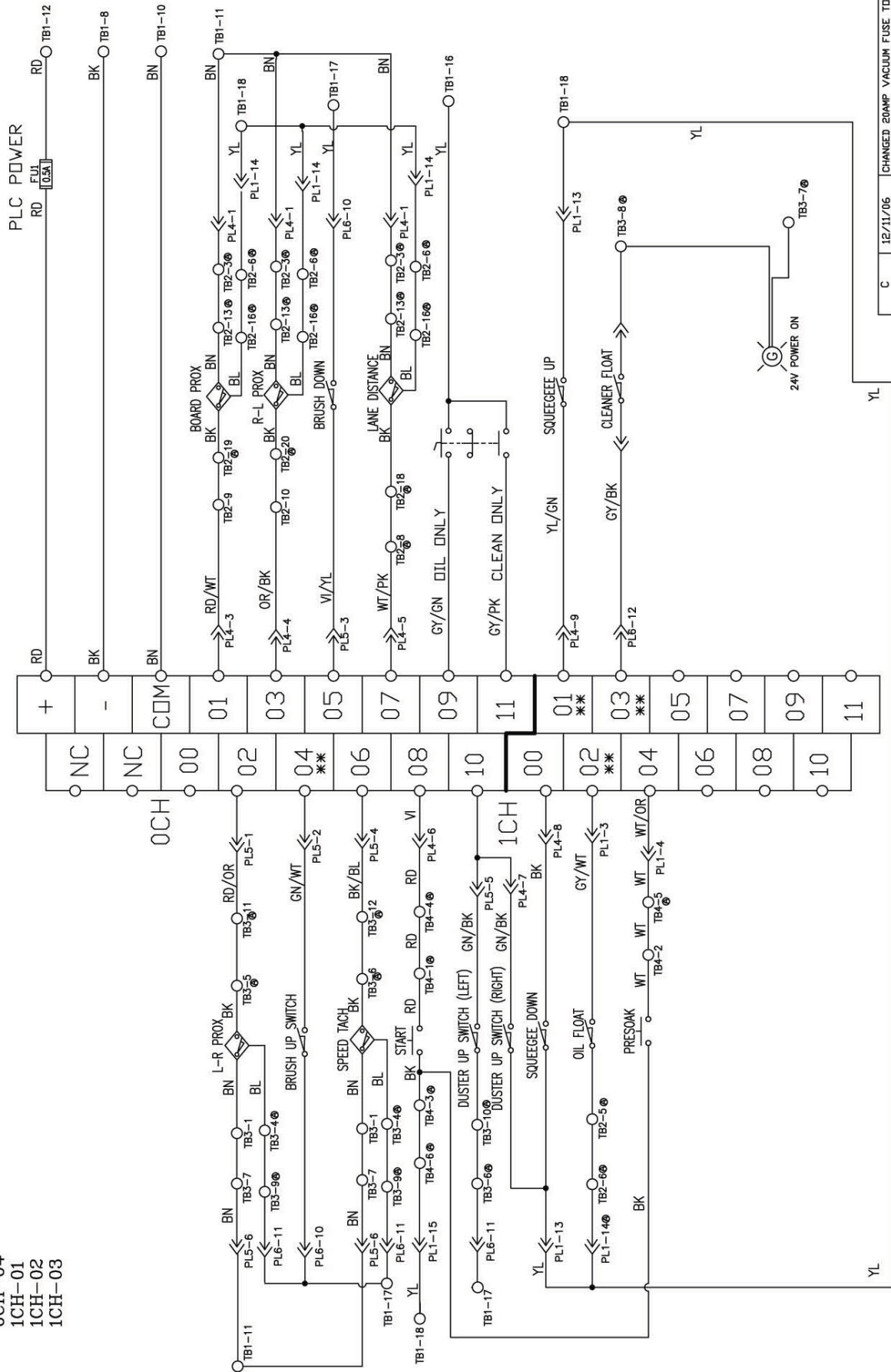


REV	LTR	DATE	DESCRIPTION
C		12/11/06	CHANGED 20AMP VACUUM FUSE TO 20AMP CIRCUIT BREAKER
B		02/06/06	CHANGED AMP GAUGE WIRING, ADDED TGGLE SWITCH, AND FUSIBLE LINK
A		09/06/05	CHANGED PLUG NUMBER, CHANGED NAME, BELLETED JN, CHANGED TERM LOCATIONS, PLUGS AND WIRE COLOR
<b>MATERIAL</b>			
NA			
<b>DESCRIPTION</b>			
KEGEL			
KUSTODIAN ION			
DRAWN BY	SLS	DATE	08/5/05
APPROVED:	HFG	REV DATE	12/11/06
DOC NO	C	SCALE	NA
REV	C	SHEET	2 OF 4

OMRON  
SYSMAC  
CPM2A  
INPUTS

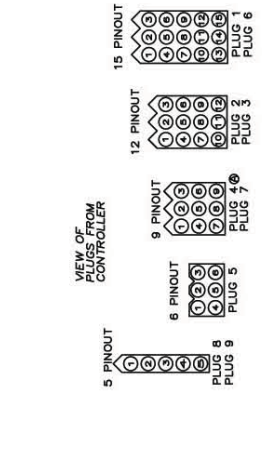
NOTE: WHEN POWER IS APPLIED TO THE MACHINE,  
THE INPUTS DESIGNATED WITH \*\* MUST BE ON TO  
START.

REF:  
OCH-04  
1CH-01  
1CH-02  
1CH-03

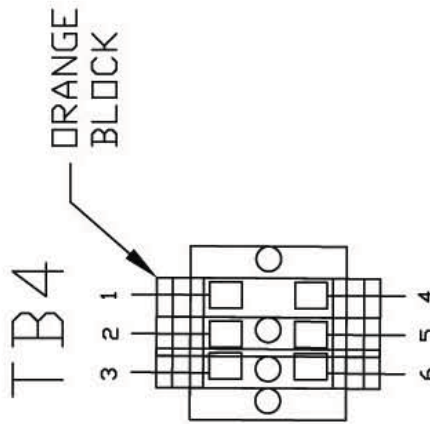
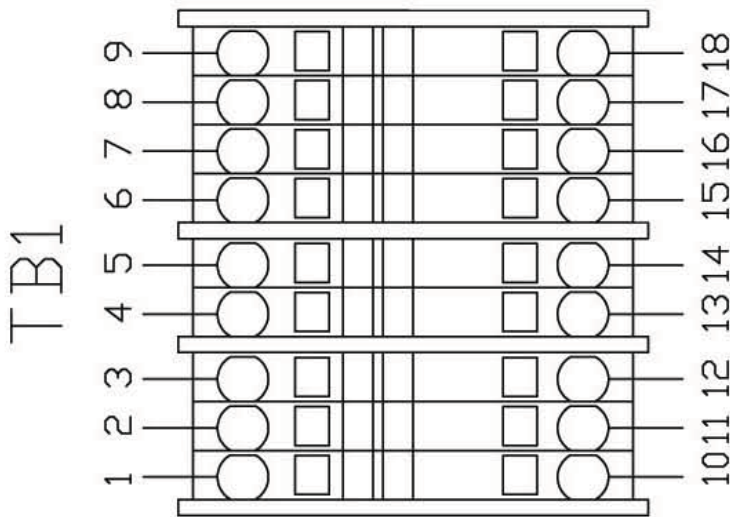
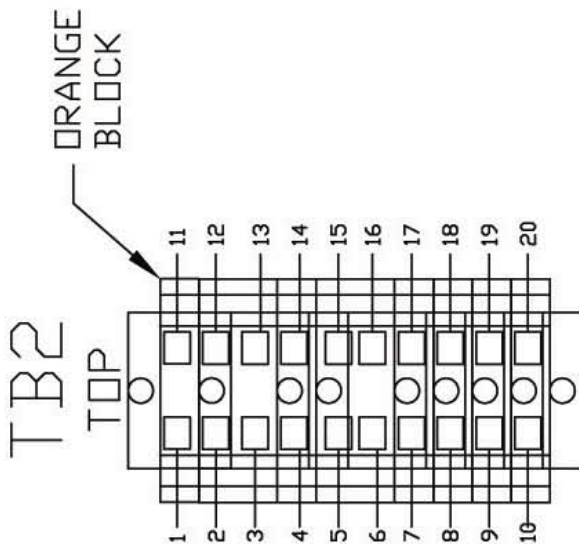
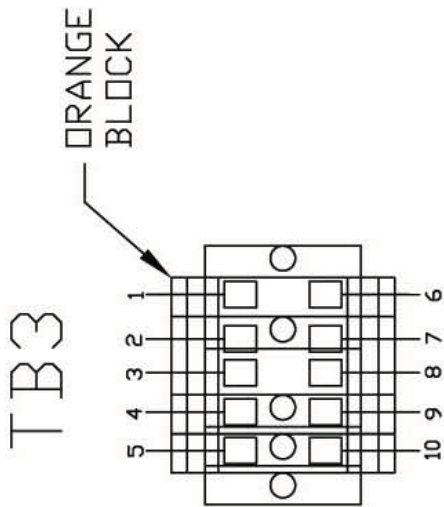


- LEGEND**
- CR1 - VACUUM RELAY
  - CR2 - CLEANER MOTOR RELAY
  - CR3 - BUFFER MOTOR RELAY
  - CR4 - DIL PUMP MOTOR RELAY
  - CR5 - L-R HEAD RELAY
  - CR6 - R-L HEAD RELAY
  - CR7 - BRUSH LIFT RELAY
  - CR8 - SQUEEGEE MOTOR RELAY
  - CR9 - UNWIND RELAY
  - CR10 - WINDUP RELAY
  - CR11 - FORWARD RELAY
  - CR12 - REVERSE RELAY
  - PL1 - MAIN PLUG - RIGHT SIDE (15)
  - PL2 - CIRCUIT BOARD PLUG (12)
  - PL3 - DC SPEED BOARD PLUG (12)
  - PL4 - PLC INPUT PLUG (RIGHT-9)
  - PL5 - PLC INPUT PLUG (LEFT-6)
  - PL6 - MAIN PLUG - LEFT SIDE (15)
  - PL7 - WATER PUMP SPEED BOARD (9)
  - PL8 - AMP GAUGE (5)
  - PL9 - BUFFER MOTOR (5)
  - TB1 - TERMINAL BLOCK 1 (MAIN)
  - TB2 - TERMINAL BLOCK 2 (OIL ASSY)
  - TB3 - TERMINAL BLOCK 3 (LEFT SIDE)
  - TB4 - TERMINAL BLOCK 4 (HANDLE)
  - PP1 - CHARGING PLUG

- CB1 - VACUUM MOTOR 20A
- FU1 - PLC INPUT POWER 0.5A
- FU2 - PLC OUTPUT COMMONS 0.5A
- FU3 - VACUUM MOTOR 4A
- FU4 - DIL PUMP MOTOR 3.2A
- FU5 - SQUEEGEE MOTOR 3.2A
- FU6 - WINDUP MOTOR 3.2A
- FU7 - DRIVE MOTOR 7.5A
- FU8 - BUFFER MOTOR 10A
- FU9 - HEAD MOTOR 0.75A
- FU10 - CLEANER MOTOR 3.2A
- FU11 - BRUSH LIFT MOTOR 3.2A
- FU12 - UNWIND MOTOR 3.2A



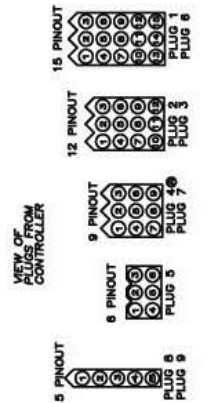
C	12/11/06	CHANGED 20AMP VACUUM FUSE TO 20AMP CIRCUIT BREAKER	
B	02/06/06	CHANGED AMP GAUGE WIRING, ADDED TOGGLE SWITCH, AND FUSIBLE LINK	
A	09/06/05	CHANGED PLUG NUMBER, CHANGED NAME, CHANGED TERM LOCATIONS, PLUGS AND WIRE COLOR	
REV	LTR	DATE	DESCRIPTION
<b>MATERIAL</b>			
NA			
DRAWN BY	DATE	DESCRIPTION	
HFG	08/5/05	KEGEL	
APPROVED:	REV DATE	KUSTDIAN ION (MODEL B)	
HFG	09/12/06	INPUT WIRING SCHEMATIC	
DOC	REV	SIZE	QTY/MACHINE PART NUMBER
B	17-5400	C	DO NOT SCALE DRAWING
REV	3	OF	4



- LEGEND**
- PL1 - MAIN PLUG - RIGHT SIDE (15)
  - PL2 - CIRCUIT BOARD PLUG (12)
  - PL3 - DC SPEED BOARD PLUG (12)
  - PL4 - PLC INPUT PLUG (RIGHT-9)
  - PL5 - PLC INPUT PLUG (LEFT-6)
  - PL6 - MAIN PLUG - LEFT SIDE (15)
  - PL7 - WATER PUMP SPEED BOARD (9)
  - PL8 - AMP GAUGE (5)
  - PL9 - BUFFER MOTOR (5)
  - TB1 - TERMINAL BLOCK 1 (MAIN)
  - TB2 - TERMINAL BLOCK 2 (COTIL ASSY)
  - TB3 - TERMINAL BLOCK 3 (LEFT SIDE)
  - TB4 - TERMINAL BLOCK 4 (HANDLE)
  - PP1 - CHARGING PLUG 6

- CR1 - VACUUM RELAY
- CR2 - CLEANER MOTOR RELAY
- CR3 - BUFFER MOTOR RELAY
- CR4 - OIL PUMP MOTOR RELAY
- CR5 - L-R HEAD RELAY
- CR6 - R-L HEAD RELAY
- CR7 - BRUSH LIFT RELAY
- CR8 - SQUEEGEE MOTOR RELAY
- CR9 - UNWIND RELAY
- CR10 - UNWIND RELAY
- CR11 - FORWARD RELAY
- CR12 - REVERSE RELAY

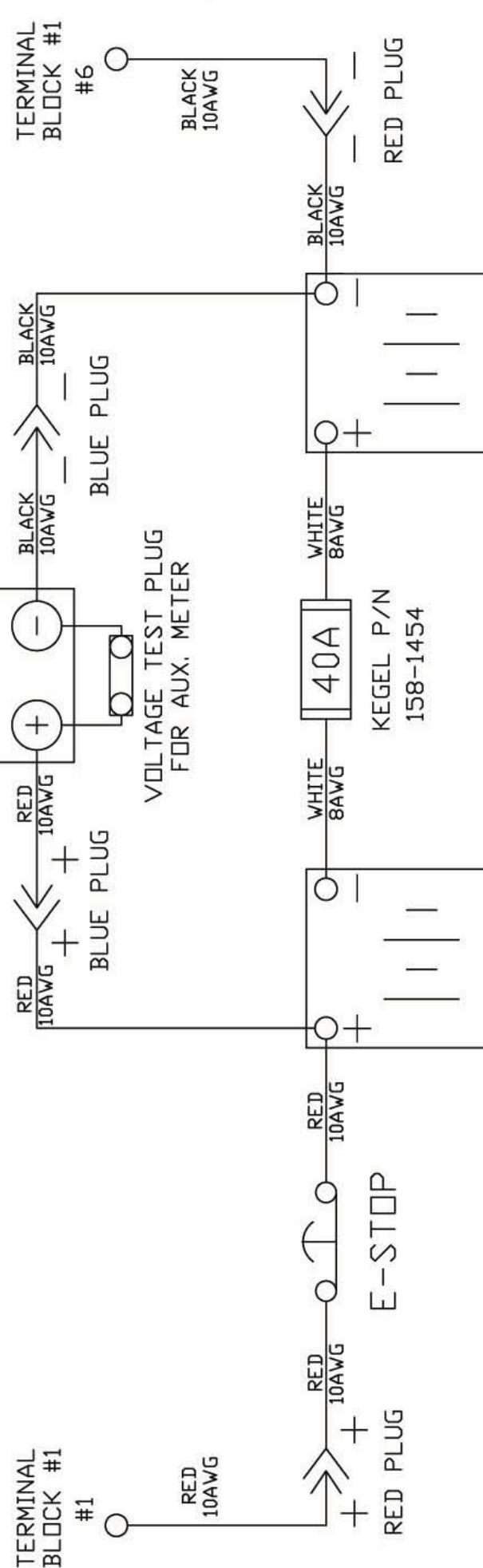
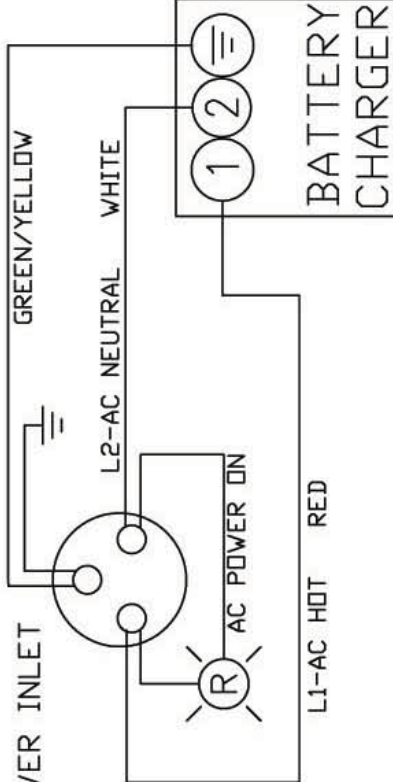
- CBI - VACUUM MOTOR 20A0
- FU1 - PLC INPUT POWER 0.5A
- FU2 - PLC OUTPUT COMMONS 0.5A
- FU3 - OIL PUMP MOTOR 4A
- FU4 - SQUEEGEE MOTOR 3.2A
- FU5 - WINDUP MOTOR 3.2A
- FU6 - DRIVE MOTOR 7.5A
- FU7 - BUFFER MOTOR 10A
- FU8 - HEAD MOTOR 0.75A
- FU9 - CLEANER MOTOR 3.2A
- FU10 - BRUSH LIFT MOTOR 3.2A
- FU11 - UNWIND MOTOR 3.2A
- FU12 - UNWIND MOTOR 3.2A



C	12/11/06	CHANGED 20AMP VACUUM FUSE TO 20AMP CIRCUIT BREAKER
B	02/06/06	CHANGED AMP GAUGE WIRING, ADDED TOGGLE SWITCH, AND FUSIBLE LINK
A	09/06/05	CHANGED PLUG NUMBER, CHANGED NAME, CHANGED TERM LOCATIONS, PLUGS AND WIRE COLOR
REV LTR	DATE	DESCRIPTION
<b>MATERIAL</b>		
NA	NA	DESCRIPTION
KEGEL	KEGEL	DESCRIPTION
1981 LONGLEAF BLDG. LAKELAND, FL 33600 (888) 794-0800		
DRAWN BY	DATE	DESCRIPTION
SLS	08/5/05	KUSTODIAN IDN
APPROVED	REV DATE	TERMINAL BLOCK LAYOUT
HFG	12/11/06	DO NOT SCALE DRAWING
C	C	SIZE / QTY / MACHINE / PART NUMBER
C	C	17-5400
SCALE	4	DIFF 4



4 3 2 1



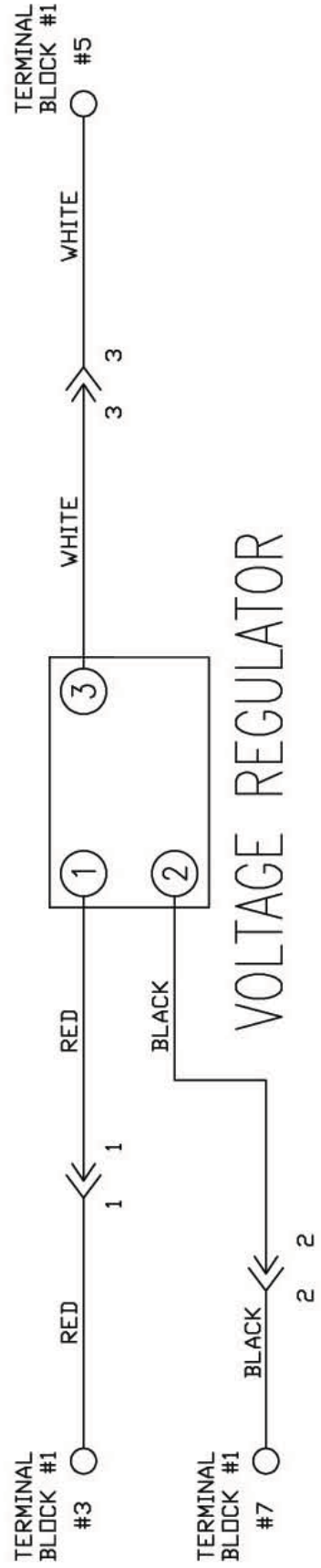
# ODYSSEY BATTERIES

MATERIAL		THE KEGEL CO.		1961 LONGLEAF BLVD. LAKE WALKER, FL 33669	
N/A		DESCRIPTION		KUSTODIAN ION	
DRAWN BY	DATE	BATTERIES, CHARGER & E-STOP WIRING			
SLS	07/28/06	DO NOT SCALE DRAWING			
APPROVED:	REV DATE	SIZE QTY/MACHINE PART NUMBER			
HFG		A	N/A		
DOC		SCALE	N/A	SHEET	1 OF 1
REV					

TOLERANCES - U.D.S.	
3	DECIMAL = ±.003
2	DECIMAL = ±.010
1	DECIMAL = ±.030

4 3 2 1

4 3 2 1



# VOLTAGE REGULATOR

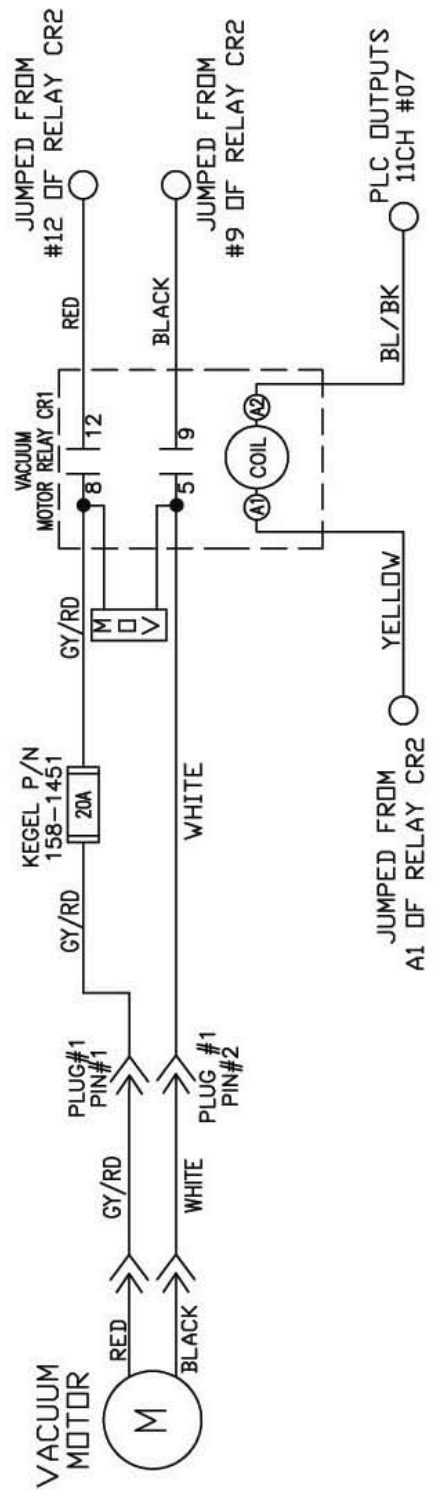
MATERIAL N/A		THE KEGEL CO. (669) 794-0200 1961 LONGLEAF BLVD. LAKE WALES, FL 33859	
DATE 07/28/06	DESCRIPTION KUSTODIAN ION	VOLTAGE REGULATOR WIRING DO NOT SCALE DRAWING	
REVISION HFG	SIZE A	QTY/MACHINE N/A	PART NUMBER N/A
DOC REV	SCALE N/A	SHEET 1	OF 1

TOLERANCES - U.I.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

4 3 2 1

4 3 2 1

D C B A

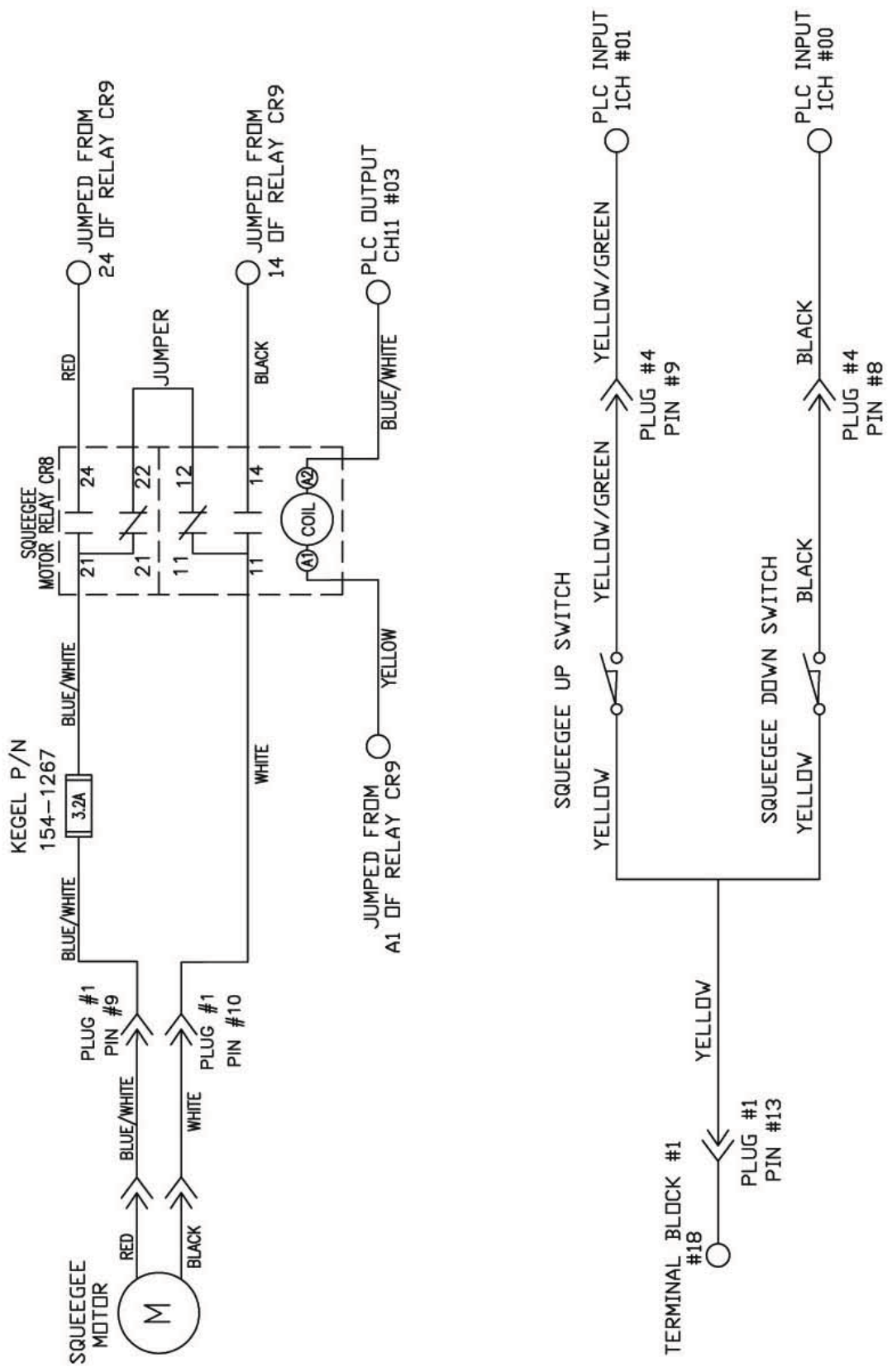


MATERIAL		N/A	
DRAWN BY	DATE	DESCRIPTION	
SLS	07/27/06	THE KEGEL CO. (868) 734-0200 1961 LONGLEAF BLVD. LAKE WALKER, FL 33869	
APPROVED:	REV DATE	KUSTODIAN ION	
HFG		VACUUM MOTOR WIRING	
DOC		SIZE	QTY/MACHINE PART NUMBER
REV		A	N/A
		SCALE	N/A
			SHEET 1 OF 1

TOLERANCES - U.O.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

4 3 2 1

4 3 2 1

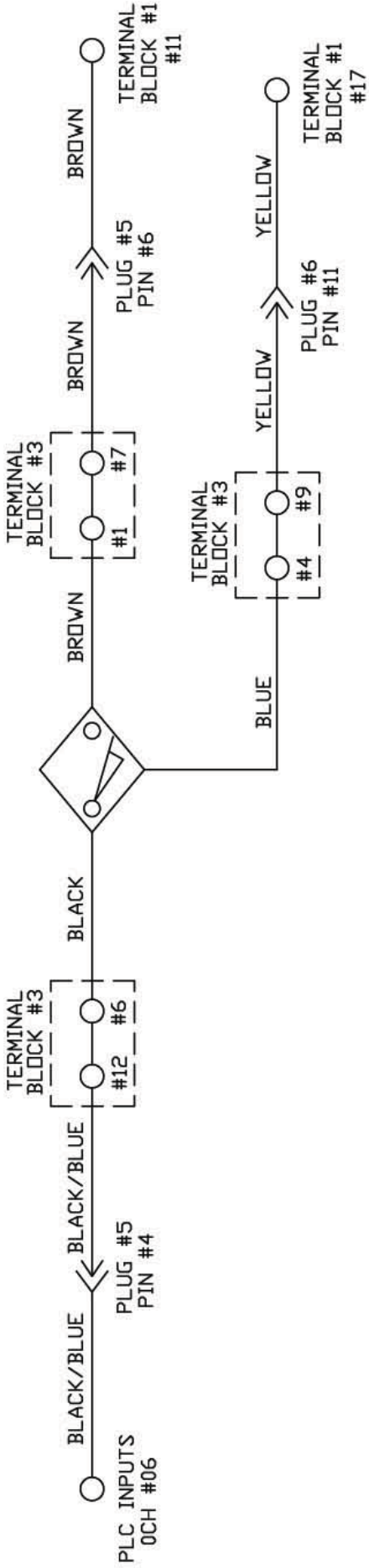


<b>MATERIAL</b> N/A		<b>DATE</b> 07/27/06		<b>THE KEGEL CO.</b> 1961 LONGLEAF BLVD. LAKE WALES, FL 33856 (888) 794-0200	
<b>DESCRIPTION</b> KUSTODIAN ION		<b>REV DATE</b> SLS		<b>DO NOT SCALE DRAWING</b>	
<b>SIZE</b> A		<b>QTY/MACHINE PART NUMBER</b> N/A		<b>SCALE</b> N/A	
<b>DOC REV</b> HFG		<b>SCALE</b> N/A		<b>SHEET</b> 1 OF 1	

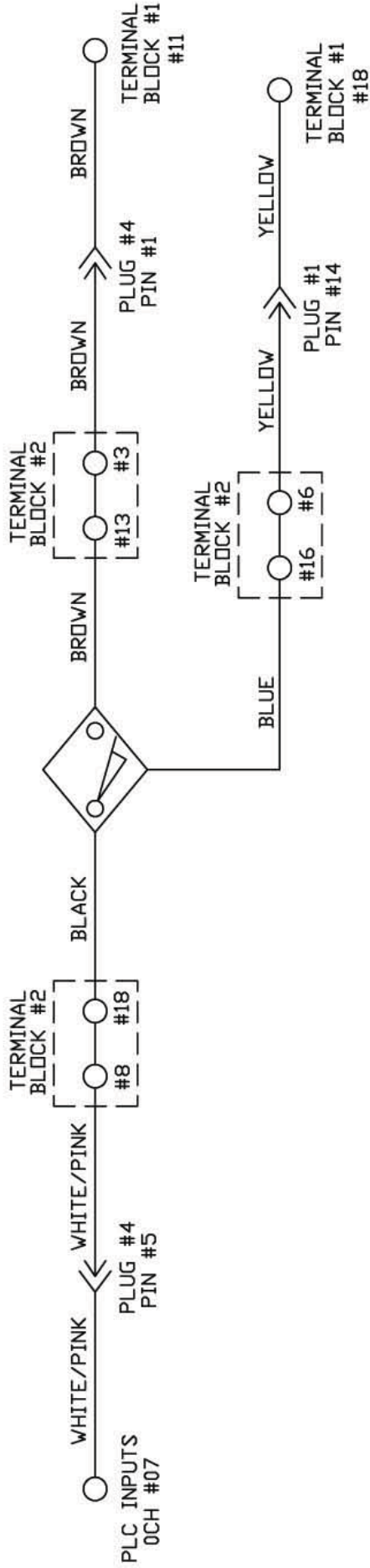
TOLERANCES - U.D.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

4 3 2 1

# SPEED TACH PROX



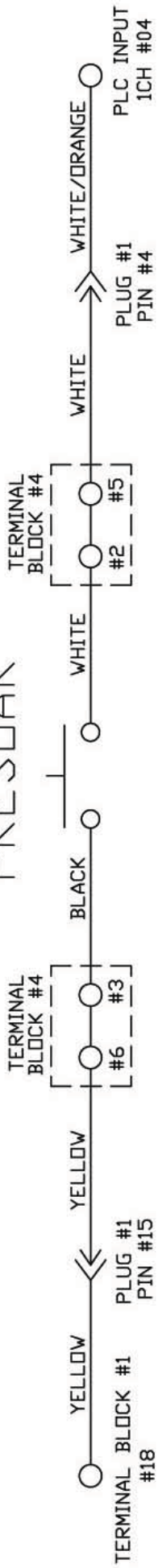
# LANE DISTANCE PROX



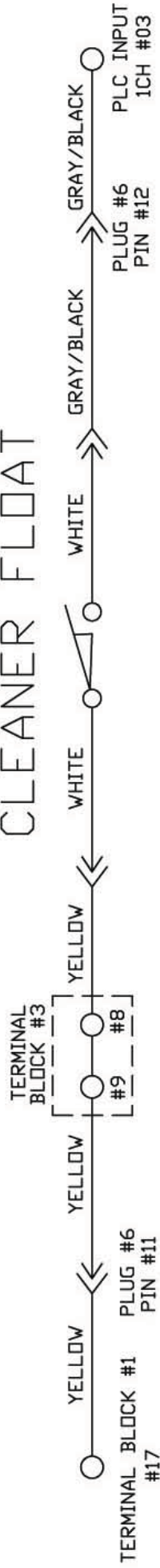
MATERIAL		N/A	
1961 LONGLEAF BLVD. LAKE WALES, FL 33859			
THE KEGEL CO. (863) 734-0200			
DESCRIPTION KUSTODIAN ION			
SPEED TACH / LANE DISTANCE WIRING			
DRAWN BY		DATE	REV
SLS		07/28/06	
APPROVED:		REV DATE	
HFG			
DOC		SCALE	N/A
REV			
		SHEET	1 OF 1

TOLERANCES - U.I.S.	
3	DECIMAL = ±.003
2	DECIMAL = ±.010
1	DECIMAL = ±.030

# PRESOAK



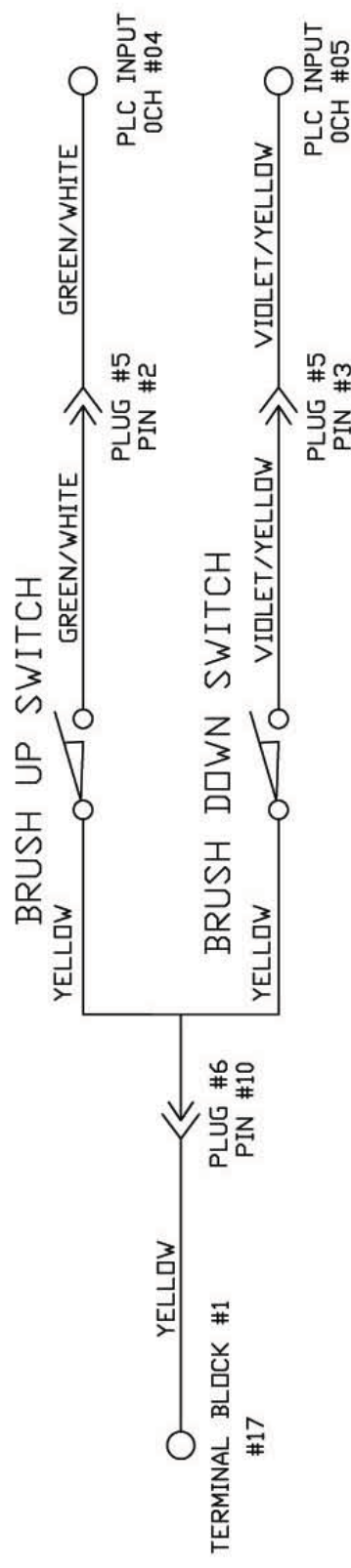
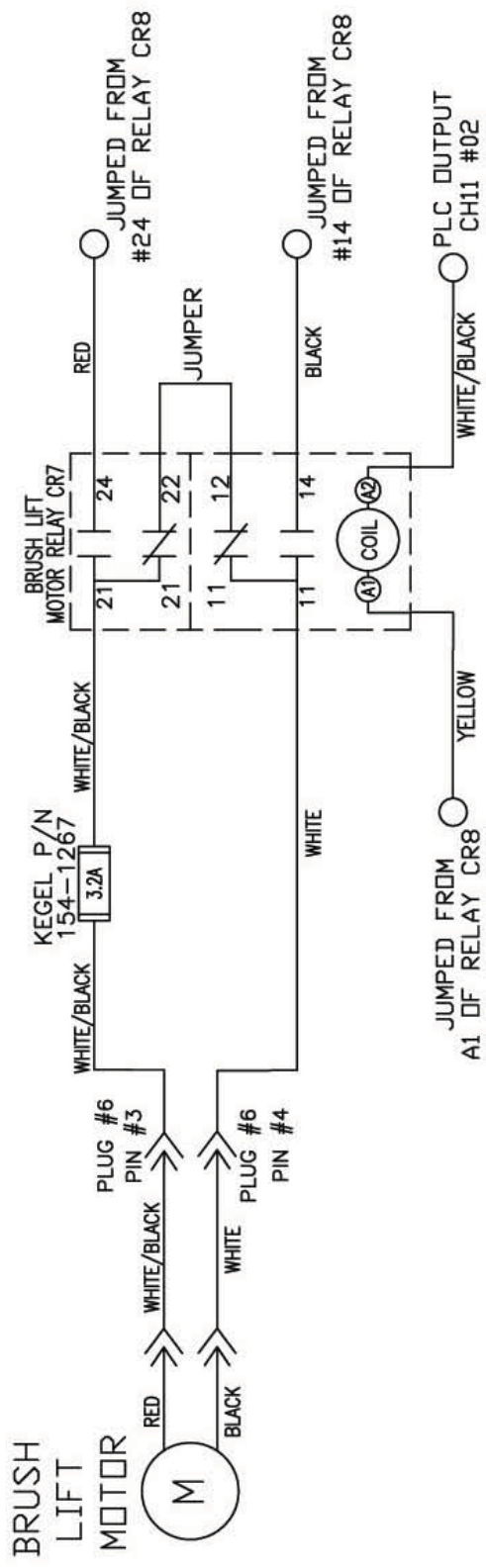
# CLEANER FLOAT



MATERIAL		N/A	
DRAWN BY	DATE	1961 LONGLEAF BLVD. LAKE WALES, FL 33856 (866) 734-0200	
SLS	07/27/06	THE KEGEL CO.	
APPROVED:	REV DATE	DESCRIPTION	
HFG		PRESOAK BUTTON & CLEANER FLOAT	
DOC		SIZE	QTY/MACHINE PART NUMBER
REV		A	N/A
		SCALE	N/A
		SHEET	1 OF 1

TOLERANCES - U.O.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

4 3 2 1



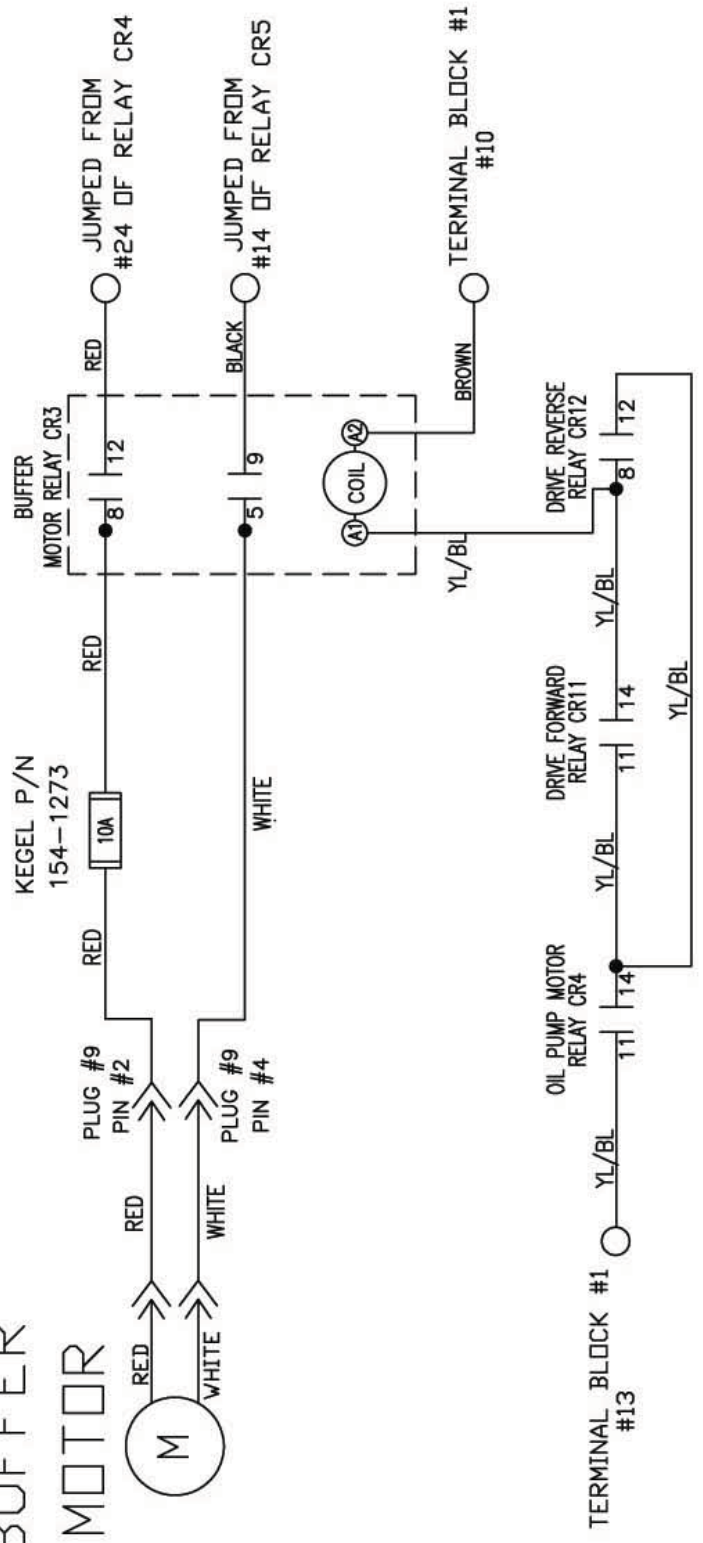
MATERIAL		THE KEGEL CO.		1961 LONGLEAF BLVD. LAKE WALKER, FL 33869 (866) 794-0200	
N/A		DESCRIPTION		KUSTODIAN ION	
DRAWN BY		DATE		BRUSH LIFT MOTOR / SWITCH WIRING	
SLS		07/27/06		DO NOT SCALE DRAWING	
APPROVED:		REV DATE		SIZE QTY/MACHINE PART NUMBER	
HFG				A N/A	
DOC		REV		SCALE N/A	
				SHEET 1 OF 1	

TOLERANCES - U.D.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

4 3 2 1

4 3 2 1

# BUFFER MOTOR



MATERIAL		N/A	
DRAWN BY	DATE	DESCRIPTION	
SLS	07/27/06	THE KEGEL CO.	
APPROVED:	REV DATE	KUSTODIAN IDN	
HFG		BUFFER MOTOR WIRING	
DOC		SIZE	QTY/MACHINE / PART NUMBER
REV		A	N/A
		SCALE	N/A
			SHEET 1 OF 1

TOLERANCES - U.D.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

4 3 2 1

D D

C C

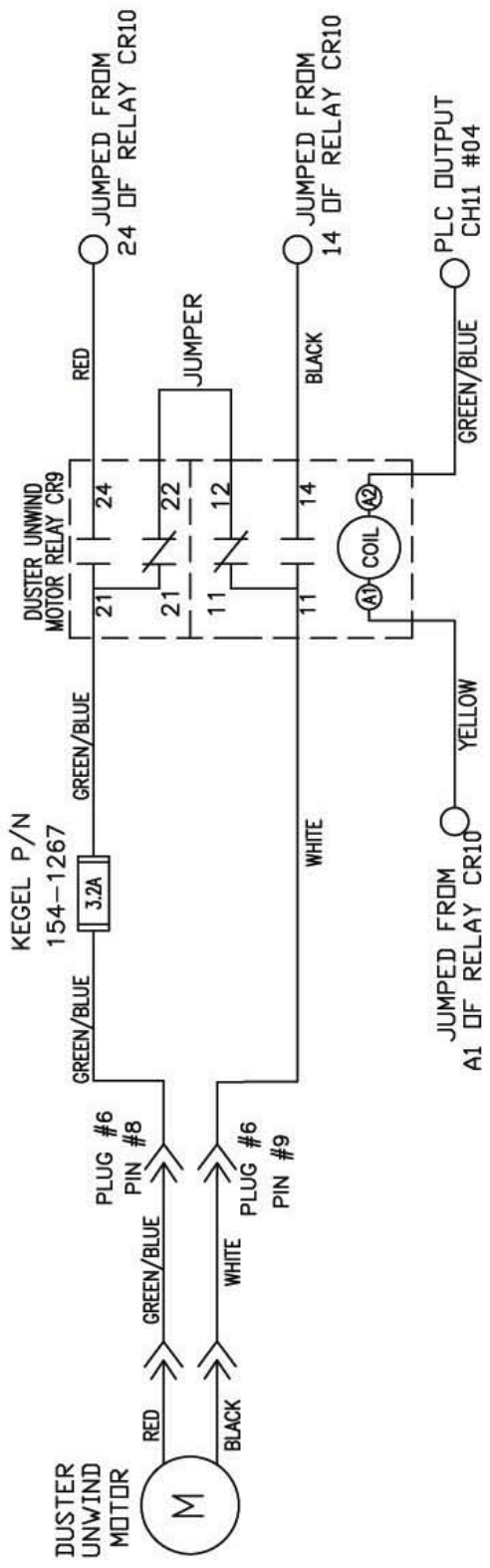
B B

A A



4 3 2 1

D C B A

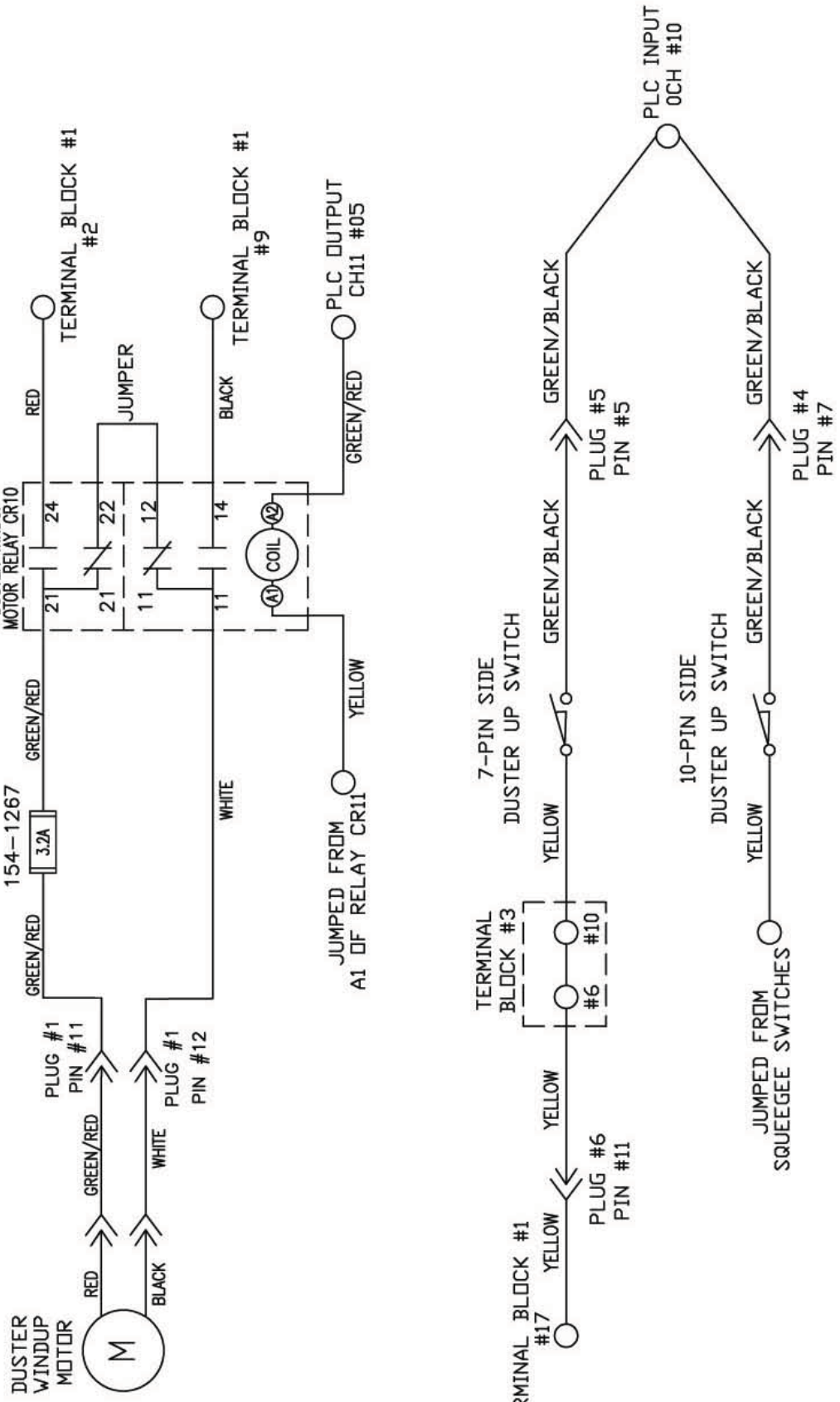


MATERIAL		THE KEGEL CO.		1961 LONGLEAF BLVD. LAKE WALES, FL 33869	
N/A		DESCRIPTION		KUSTODIAN IDN	
DRAWN BY	DATE	DUSTER UNWIND MOTOR		DO NOT SCALE DRAWING	
SLS	07/27/06	SIZE	QTY/MACHINE PART NUMBER		
APPROVED:	HFG	A	N/A	N/A	
DOC		SCALE	N/A	SHEET	1 OF 1
REV					

TOLERANCES - U.D.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

4 3 2 1

4 3 2 1



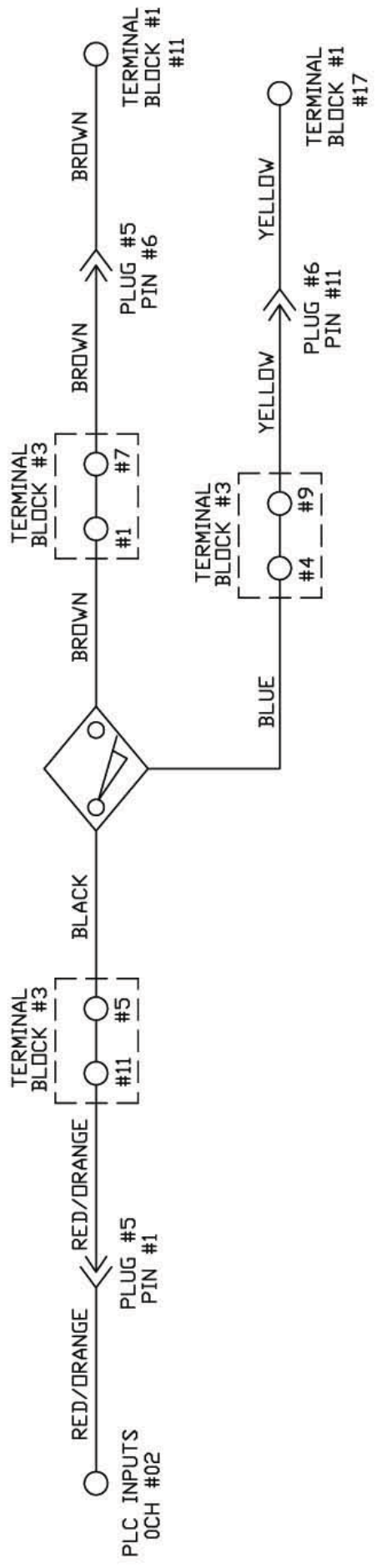
MATERIAL		N/A	
DATE	07/27/06	DESCRIPTION	KUSTODIAN ION
DRAWN BY	SLS	DUSTER UP MOTOR / SWITCH WIRING	
APPROVED:	HFG	DO NOT SCALE DRAWING	
DOC REV		SIZE	A
		QTY/MACHINE PART NUMBER	N/A
		SCALE	N/A
		SHEET	1 OF 1

TOLERANCES - U.O.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

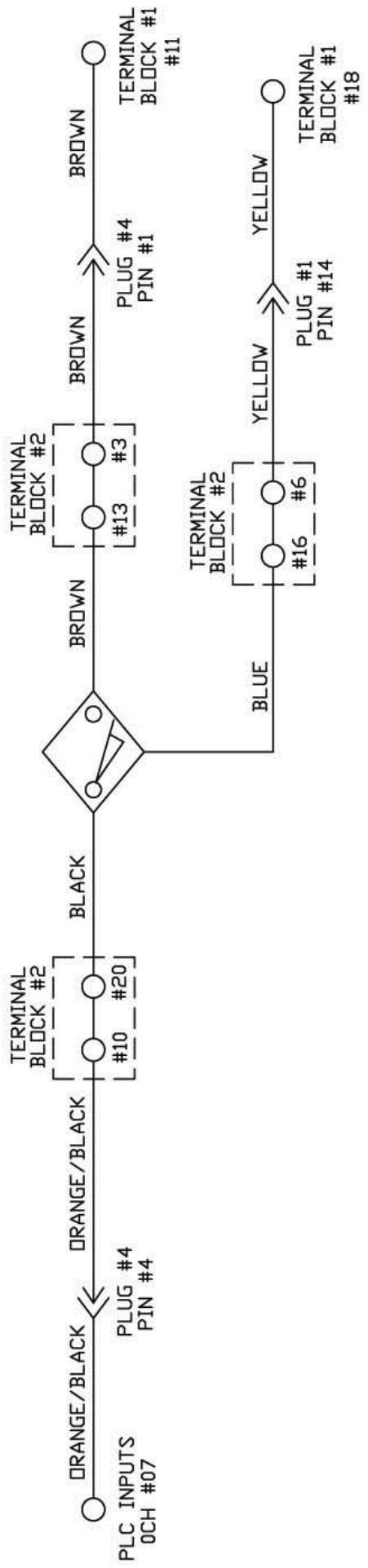
THE KEGEL CO.		1961 LONGLEAF BLVD. LAKE WALES, FL 33859 (888) 794-0200	
KUSTODIAN ION			
DUSTER UP MOTOR / SWITCH WIRING			
DO NOT SCALE DRAWING			
SIZE	A	N/A	
QTY/MACHINE PART NUMBER	N/A	N/A	
SCALE	N/A	N/A	
SHEET	1	OF	1

4 3 2 1

### L-R HEAD PROX



### R-L HEAD PROX

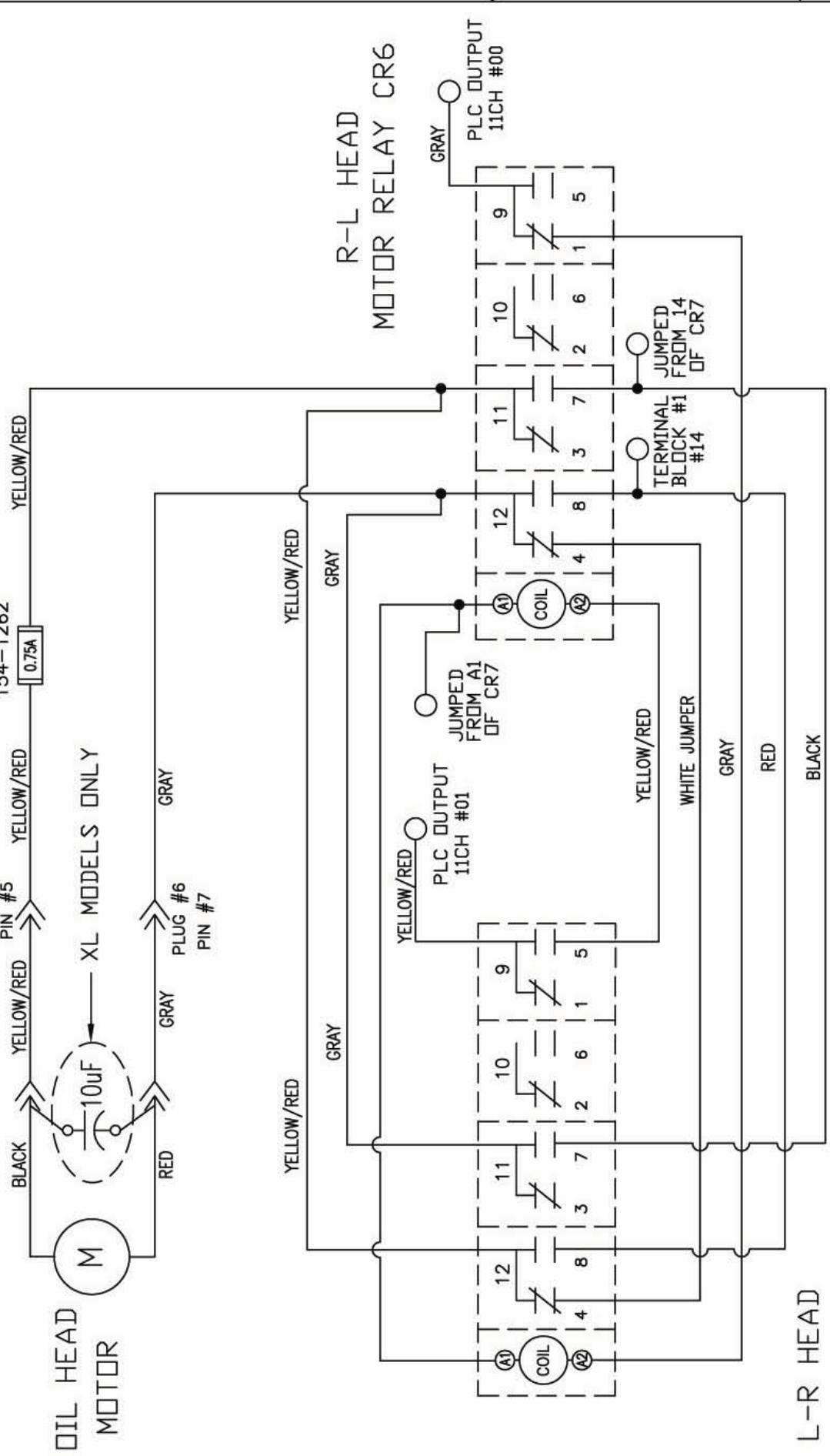


TOLERANCES - U.O.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

MATERIAL		N/A	
DRAWN BY	DATE	1961 LONGLEAF BLVD. LAKE WALES, FL 33869	
SLS	07/27/06	THE KEGEL CO.	
APPROVED:	REV DATE	DESCRIPTION	
HFG		KUSTODIAN ION	
DOC		L-R & R-L PROX WIRING	
REV		DO NOT SCALE DRAWING	
		SIZE	QTY/MACHINE PART NUMBER
		A	N/A
		SCALE	N/A
		SHEET	1 OF 1

3 2 1

4 3 2 1



MATERIAL		N/A	
DRAWN BY	DATE	DESCRIPTION	
SLS	12/11/06	OIL HEAD MOTOR WIRING	
APPROVED:	REV DATE	DO NOT SCALE DRAWING	
HFG		SIZE	QTY/MACHINE PART NUMBER
DOC		A	N/A
REV		SCALE	N/A
		SHEET	1 OF 1

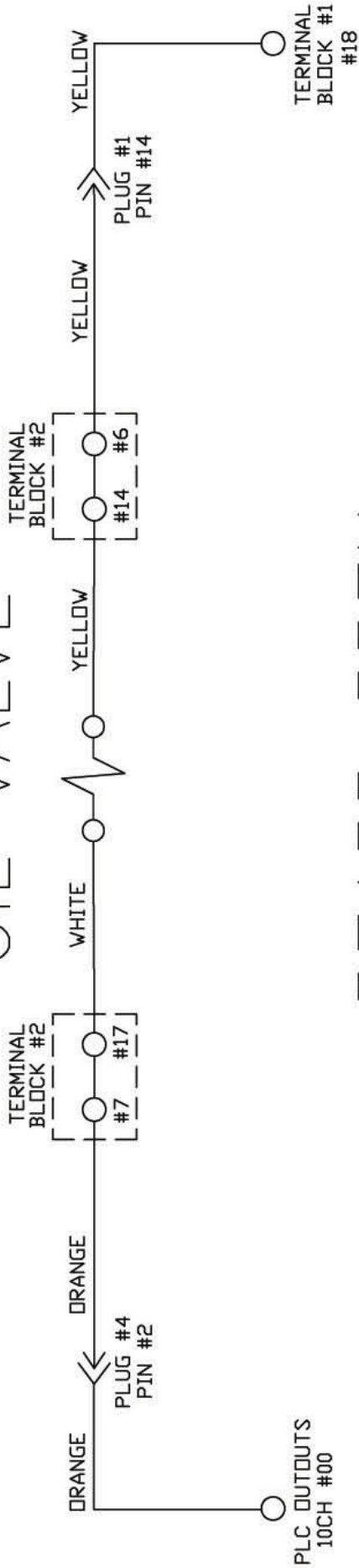
THE KEGEL CO. 1961 LONGLEAF BLVD.  
LAKE WALKER, FL 33969  
(866) 734-0200

KUSTODIAN ION  
OIL HEAD MOTOR WIRING  
DO NOT SCALE DRAWING

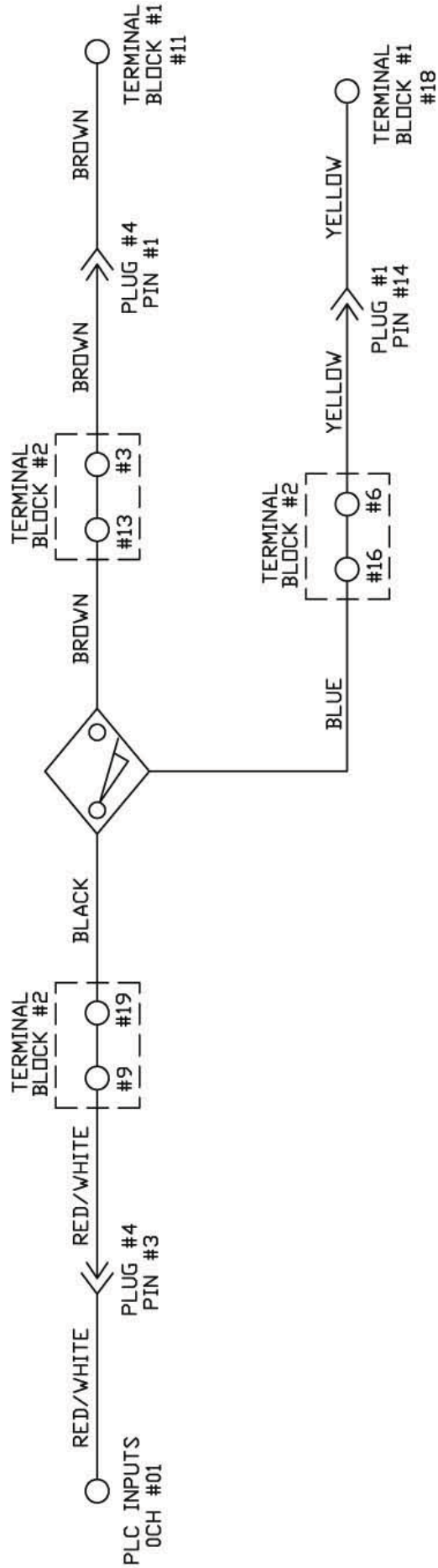
TOLERANCES - U.D.S.  
3 DECIMAL = ±.003  
2 DECIMAL = ±.010  
1 DECIMAL = ±.030

4 3 2 1

# OIL VALVE



# BOARD PROX



MATERIAL		THE KEGEL CO. 1961 LONGLEAF BLVD. LAKE WALES, FL 33856 (863) 794-0200	
DESCRIPTION		OIL VALVE & BOARD PROX WIRING DO NOT SCALE DRAWING	
DRAWN BY	DATE	SIZE	QTY/MACHINE PART NUMBER
SLS	07/27/06	A	N/A
APPROVED:	REV DATE	SCALE	N/A
HFG		SHEET	1 OF 1
DOC			
REV			

TOLERANCES - U.D.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

4 3 2 1

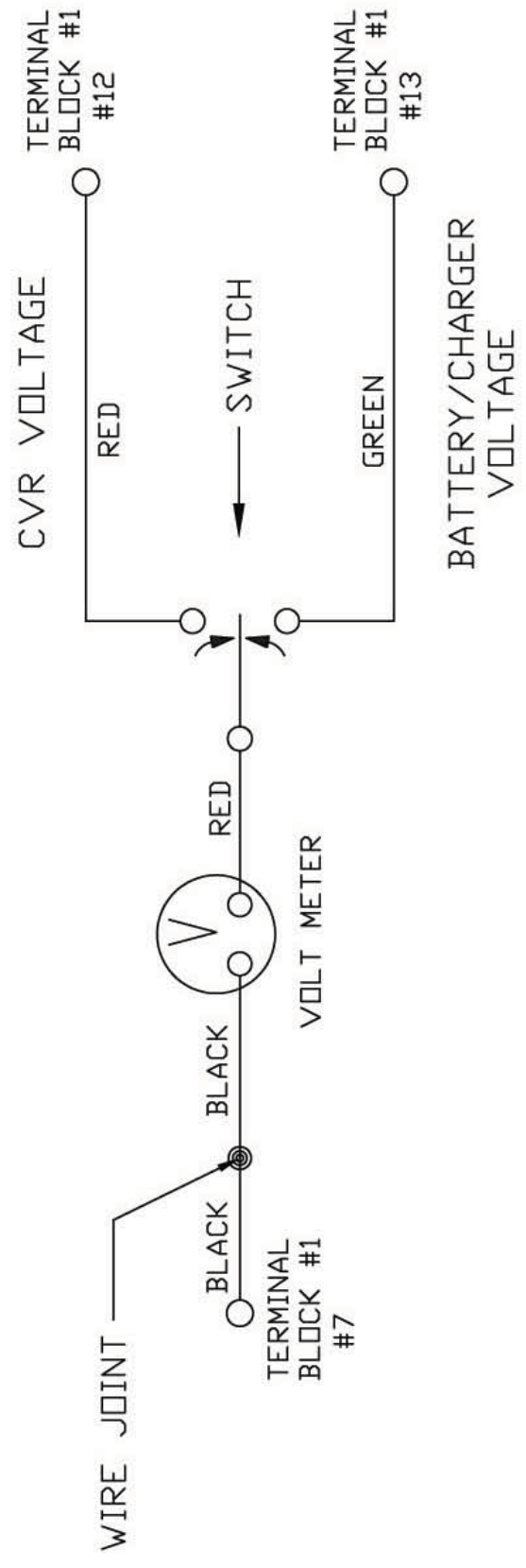
4 3 2 1

D C B A

149

4 3 2 1

D C B A



TOLERANCES - U.O.S.  
 3 DECIMAL = ±.003  
 2 DECIMAL = ±.010  
 1 DECIMAL = ±.030

MATERIAL		THE KEGEL CO. (889) 794-0200 1951 LONGLEAF BLVD. LAKE WALKER, FL 33859	
N/A		KUSTODIAN ION	
DRAWN BY	DATE	DESCRIPTION	
SLS	07/28/06	VOLT METER/ SWITCH WIRING	
APPROVED:	REV DATE	DO NOT SCALE DRAWING	
HFG		SIZE	QTY/MACHINE PART NUMBER
		A	N/A
DOC		SCALE	N/A
REV			SHEET 1 OF 1

4 3 2 1